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PRINTING

A Short History of the Art

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PREFACE

IN order to get a general view of the progress of the Art of Printing throughout Europe and America, it has been necessary hitherto to consult a considerable number of monographs written in different languages and not always easily available. The present work has therefore been planned to overcome these existing obstacles and to give in a concise and handy form, it is believed for the first time in English, a general comprehensive survey of the development of printing in many lands from its invention up to comparatively recent times.

To achieve this purpose the foremost experts on the subject have been invited to collaborate in producing a series of chapters to cover the whole ground. Each writer is well known in his particular field, and, where necessary, translations have been made under the author's own supervision. This fact may account for certain inequalities in the arrangement of the work, and little has been done to change the foreign expressions except where such changes were essential to the clarity of the text.

It is only necessary for the reader to turn to the selected bibliographies in each section to realise how

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vast has been the work of compressing into one volume the enormous mass of material, collected and sifted during the researches of the last half century by such authorities in the field of typographical history as Claudin, Collijn, E. Gordon Duff, G. Fumagalli, K. Haebler, J. T. Medina, A. W. Pollard, E. Vouillième, to mention but a few of the men who have devoted a life-study to the history of the art preservative of all arts.

This latter period has been especially prolific in accurate research, dispelling the clouds of legend and assumption which formed the main portion of the histories of printing in the early part of the nineteenth century.

From the time that Henry Bradshaw laid down the laws of the natural history system of bibliography, research has been proceeding on the lines he suggested, and the history of printing now depends entirely upon the actual known books of the various printers or proved documentary evidence of their work. This volume is based on these principles, and the names of the contributors¹ are a sufficient guarantee not

¹ Dr Ernst Crous is well known for his connection with the *Gesammt Katalog*. Prof. G. Fumagalli, already mentioned as the greatest living authority on Italian printing, is the author of the "*Lexicon Typographicum Italiae*." M. Charles Mortet has written "*Les Origines et les debuts de l'Imprimerie*," 1922, and other authoritative works. M. Maurits Sabbe, Curator of the most famous Printing Museum in Europe, is author of "*La Vie des Livres a Anvers aux XVI^e, XVII^e, et XVIII^e siecles*" published in 1926. Mr James P. R. Lyell has perhaps the most interesting

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only of their knowledge, but of their ability to reject unproved theories.

As the great development took place in Europe and America, it has been necessary to confine the principal part of this book to these Continents. It has, however, been thought well to give in a short appendix an outline of the way in which printing first appeared in Asia, Africa, and Australasia.

It has not been possible in this volume to survey the whole of the various ramifications caused by books having been printed outside the boundaries of countries for which they were issued. The vast mass of English books printed on the Continent, of Slavonic books printed in various countries outside the Slavonic area, the French Clandestine Presses in Holland and Germany, and countries such as Switzerland where the printing was mainly of German,

collection of early Spanish books in this country and has written the only book on "Early Book Illustration in Spain." Mr Henry R. Plomer, who is the author of "A Short History of English Printing," "English Printers, Ornaments," and "Wynkyn de Worde," has also written many books and papers on English Printers and Printing for many years past. Dr Lauritz Nielsen is the author of the most authoritative work on the early history of printing in Denmark. Mr L. C. Wharton, who has made a special study of Slavonic history, is in charge of the Slavonic sections of the British Museum Library. The work of Mr George P. Winship, of Harvard College Library, on the Census of Incunabula owned in America, has been recognised to be of the utmost importance; and Mr Lawrence C. Wroth, who succeeded him at the John Carter Brown Library, is the author of an important volume on the history of printing in Colonial Maryland, and Monographs on early printers in Virginia and Connecticut.

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French, or Italian nationality, according to the geographical situation of the Cantons, make clear demarcation difficult, and the experts have therefore been asked to use their own judgment as to the advisability of dealing with a linguistic rather than a political area.

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PRINTING

A Short History of the Art

GERMANY

BY ERNST CROUS

I. GUTENBERG

SEVEN cities have contended for the honour of being the birthplace of Homer. The invention of printing similarly is claimed by Mainz, Strassburg, Haarlem, Utrecht, Avignon, Feltre, and Kuttenberg. The discussion of their rival merits only becomes serious in the case of Holland and Germany, between the claims of Coster at Haarlem and Gutenberg at Mainz (or perhaps at Strassburg). But even if we admit a prefigurement (as the "Cologne Chronicle" of 1499 says) in Holland, "it was"—to use the words of Alfred W. Pollard—"in Germany and at Mainz that the Printed Book as the ambitious rival of the Manuscript first came into being, and it was by Germans that Printing was carried over Europe, and no small proportion of the presses in Italy, France, Holland, Spain, and England were actually worked."

Johann Gutenberg was born at Mainz about 1400. He belonged to the Gutenberg branch of the patrician family of Gensfleisch, of which many members are known from the fourteenth down to the seventeenth century. He had left Mainz before 1430 and lived at Strassburg, at all events from 1434 onwards. He

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occupied himself there with mechanical inventions, and probably from about 1436 onwards, especially with the question of printing. He remained in Strassburg until 1444 or later, and in 1448, at the latest, he returned to Mainz. During 1444-48, when his whereabouts are unknown, he mastered his problem so far as to be able to print small items with movable types. A proof of this is that fragments exist of a calendar which, according to astronomers, is intended for the year 1448, and of copies of several editions of the school-book of Donatus, as well as of a copy of a "Sibyllenbuch," a poem in the German language; the Donatuses showing a more primitive state of the type than the calendar, and the Sibyllenbuch the most primitive state of all. This oldest variant of the type is called the Donatus type, the second being known as the Calendar type.

In the first half of the fifties of the century we find Gutenberg in association with Johann Fust, a citizen of Mainz, who lent him money for "the work of books," and also several other printers, of which first in importance is Peter Schöffer (a clerk in Paris as late as 1449). There is no doubt that these men learnt the art of printing from Gutenberg, and there is much probability that Schöffer improved the art remarkably, though we cannot say exactly in what respect. Gutenberg failed to pay the interest on the loans of Fust, a law-suit followed, and after 1457 Gutenberg became bankrupt, whereas Fust and Schöffer—later on the son-in-law of Fust—are found together at the head of an important printing-office. It may be that in the following years Gutenberg (with the aid of another citizen of Mainz, Dr Humery) once more had

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printing materials at his disposal, but from 1465 he was a pensioner at the Court of the Archbishop-Elector of Mainz, and at the end of 1467 or in the beginning of 1468 he died.

The earliest production of the printing press at Mainz contain no information as to who printed them, and the question to whom they should be attributed has aroused much discussion—whether to Gutenberg, to Schöffer, or to some unknown printer. Such controversies cannot be settled here ; it will be sufficient to report on the productions concerned according to the types used in them. These types are those of the 36-line Bible and of the 42-line Bible¹ and those of the 31-line Indulgence and of the 30-line Indulgence.

The older variants of the 36-line Bible type are the Donatus and the Calendar type referred to above. After the 1448 Calendar more than a dozen Donatuses, calendars and small pamphlets were printed in the Calendar type. The 36-line Bible itself dates from the second half of the fifties and belongs probably to Bamberg. Finally, in the first half of the sixties, the type was found in the hands of Albrecht Pfister, a married clergyman of Bamberg, who printed the first illustrated German popular books with it. Though the 42-line Bible type is later than that of the 36-line Bible, the 42-line Bible (the Mazarine Bible²) itself is older than that of 36-lines (the Bamberg Bible). It was printed in the first half of the fifties and is probably the "work of books" which brought to-

¹ *I.e.* the Bibles with 36 lines and 42 lines respectively to a full page.

² So called because the copy of the Bibliothèque Mazarine at Paris was the first to attract general attention.

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gether Gutenberg and Fust. Later on this type was in possession of Schöffer, but he seldom used it.

The two types used for indulgences (which are much smaller than the Bible types and the first suitable for ordinary book work) only appear in two sets of indulgences printed in 1454 and 1455 for the Proctor-General of the King of Cyprus. The Pope had allowed him to raise money in this way for the war against the Turks, who had taken Constantinople in 1453 and were then menacing Cyprus. Each of these sets has one of the Indulgence types as text type and one of the Bible types for head-lines, etc., the 31-line Indulgence type being connected with the 36-line Bible type and the 30-line Indulgence type with a modification of the 42-line Bible type.

A type which does not belong to the earliest series, but is often attributed to Gutenberg, is the *Catholicon* type. We meet it in 1460 at Mainz in the first edition of the *Catholicon*, a Latin Grammar and vocabulary of Johannes Balbus de Janua, and, about the same time, in a few pamphlets and indulgences besides. At the end of the sixties and during the seventies we find this type again at Eltville (near Mainz), where the Bechtermünze, who were distant relatives of Gutenberg, then had a printing-office. The authority for attributing the *Catholicon* (and with it the type and the early small pieces) to Gutenberg is a statement at the end of the book which seems appropriate only to the actual inventor of printing. This statement, translated, runs as follows :

“ By the help of the Most High, at Whose will the tongues of infants become eloquent, and who oft-times reveals to the lowly that which He hides from

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the wise, this noble book Catholicon, in the year of the Lord's Incarnation 1460, in the bounteous city of Mainz of the renowned German nation, which the clemency of God has deigned with so lofty a light of genius and free gift to prefer and render illustrious above all other nations of the earth, without help of reed, stilus, or pen, but by the wondrous agreement, proportion and harmony of punches and types has been printed and brought to an end."

LITERATURE: Festschrift zum fünfhundertjährigen Geburtstage von Johann Gutenberg, herausgegeben von Otto Hartwig. Mainz, 1900.—Veröffentlichungen der Gutenberg-Gesellschaft. Mainz, 1902, etc.—Jahresberichte der Gutenberg-Gesellschaft, with Beilagen. Mainz, 1902, etc.—*Otto Hupp*: Ein Missale speciale Vorläufer des Psalteriums von 1457. München, Regensburg, 1898.—*Otto Hupp*: Gutenbergs erste Drucke, *ib.* 1902.—*Otto Hupp*: Zum Streit um das Missale speciale Constantiense. Strassburg, 1917.—*Gottfried Zedler*: Von Coster zu Gutenberg. Leipzig, 1921.—*J. H. Hessels*: The Gutenberg Fiction. London, 1912.—*Charles Mortet*: Les origines et les débuts de l'imprimerie. Paris, 1922.—Pamphlets, articles, and reviews of *Dziatzko*, *Haebler*, *Pollard*, *Schwenke*, *Zedler*, etc.

II. THE FIFTEENTH CENTURY

On the vigil of the Assumption (14th of August), 1457, the first book with a printed date, the splendid Psalter of Fust and Schöffer was issued from the Press. The question as to whether Gutenberg had anything to do with the making of its types and initials has not yet been decided. Soon afterwards we also find printing presses installed at Bamberg (see Chapter I) and up the Rhine at Strassburg. In con-

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sequence of the war between two rivals for the seat of the Archbishop-Elector the sack of Mainz disturbed printing there for some time after 1462, and the art spread down the Rhine to Cologne (and to Eltville, near Mainz, see Chapter I). After the death of Gutenberg it reached Augsburg and Basel in 1468, and in 1470, Nuremberg (and Beromünster in Switzerland). In the seventies we also find printers in about twenty more places in German-speaking countries, the more remarkable of them being in the south-west, Spires, Ulm, Esslingen, Reutlingen, Memmingen, and in the north, Erfurt, Lübeck, and Magdeburg (perhaps also in Zürich). During the eighties about twenty new printing towns must be added, among them Heidelberg and Hagenau in the south-west, Leipzig in the north (also Stuttgart, Vienna, and perhaps Berlin). The last ten years of the century brought the printing art to a dozen other places of rather smaller importance.¹

¹ According to Voulliéme, during the fifteenth century printing was introduced into German and Swiss places in the following order :

Mainz	(1445 ?)	Merseburg,	1473
Bamberg	(1457 ?)	Marienthal,	1474
Strassburg	(1458)	Blaubeuren,	1475
Cöln	(1465)	Breslau,	1475
Eltville,	1467	Burgdorf,	1475
Augsburg,	1468	Trient,	1475
Basel	(1468)	Rostock,	1476
Nürnberg,	1470	Reichenstein (= Fautsberg-	
Beromünster,	1470	Rheinstein ?),	1477
Speyer,	1471	Genf,	1478
Ulm	(1472)	Schussenried,	1478
Lauingen,	1472	Reutlingen	(1478 ?)
Esslingen,	1472	Zürich	(1479)
Erfurt,	1473	Würzburg	(1479)
Lübeck	(1473)	Passau	(1480)

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More than half the two hundred or so printers recorded for this period in Germany are to be found along the Rhine, in Cologne, Strassburg, and Basel, and from Basel going to the north-east in Augsburg, Nuremberg, and from the eighties also in Leipzig. These six towns alone produced nearly two-thirds of the output of all the German presses up to 1500, this German output itself being not quite one-third of perhaps 30,000 incunabula of all Europe. Three of these towns were University seats; they preferred the Latin language, thin quartos in Cologne and Leipzig, big folios in Basel prevailing. Leipzig catered on old-fashioned lines for students of all faculties, in Cologne theology predominated, whereas Basel was remarkable for humanistic tendencies. Of the other three towns Nuremberg—mainly printing for export to the north and east—published more especially substantial folios of serious literature in Latin, and

Magdeburg,	1480	Stuttgart	(1486)
Memmingen	(1480)	Stendal	(1487)
Leipzig,	1481	Zweibrücken,	1487
Urach,	1481	Hagenau,	1489
Trier,	1481	Freiburg i. B.	(1490)
Rougemont,	1481	Kirchheim	(1490)
Wien,	1482	Hamburg,	1491
Metz,	1482	Marienburg,	1492
München,	1482	Lüneburg,	1493
Meissen,	1483	Freiberg i. S.,	1495
Berlin,	1484	Freising,	1495
Eichstätt,	1484	Zinna	(1495)
Heidelberg	(1484)	Offenburg,	1496
Ingolstadt	(1484)	Tübingen,	1498
Winterberg,	1484	Danzig,	1498
Regensburg,	1485	Sursee,	1500
Münster,	1485	Pforzheim,	1500
Schleswig,	1486		

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Augsburg vernacular books of a smaller size for the well-educated burgher. Whatever was done elsewhere in Germany was also done in Strassburg, her output being "more representative of that of Germany as a whole than is the case with any other single city" (Pollard).

A short list of the more important printers must again include the office of Fust and Schöffer, which did very fine work in the sixties, including the first book in a text type of normal size ("Durandus") and the first editions of Canon Law (the commentary in a smaller type completely surrounding the text of two columns in a larger one), and of the classics (Cicero, "De officiis"). Fust died in 1466 or 1467, but Schöffer continued work till the beginning of the next century. Of printers in second-rate printing places Johann Zainer at Ulm, a rival of his relative at Augsburg, must be mentioned, and the Brandis family (Lucas, Marcus, Matthaeus, and Moritz) who did a good deal of printing at Merseburg, Leipzig, Magdeburg, and Lübeck.

At Cologne the most prominent printers were Ulrich Zell, who introduced the art there, Johann Koelhoff, father and son, the latter being especially known by his "Cologne Chronicle" and its often-cited report about the invention of printing; and for the earlier and later part of the period respectively Arnold Therhoernen and the prolific Heinrich Quentell. The first printers at Strassburg were Johann Mentelin, who published the first German Bible, his son-in-law Adolf Rusch, called the R printer, because he used a curious R in one of his types, and Heinrich Eggestein; from the seventies Georg Husner (the

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printer of the "Jordanus de Quedlinburg"), in the eighties and nineties Johann Grüninger and Johann Prüss were at the head of the most important offices. Michael Wenssler, to whom we owe a number of splendid service-books, and Johann Amerbach, a master of arts himself and in association with important scholars, predominated at Basel, the former in the earlier years, the latter at the end of this period. Augsburg became celebrated through Günther Zainer (1468-77), Johann Baemler and Anton Sorg, who both began in the seventies and ended in the nineties, Johann Schönsperger and Erhard Ratdolt, who both began in the eighties, the latter having already worked with great success at Venice. At Nuremberg Anton Koberger, the greatest German publisher of his time, was most famous; next to him came Friedrich Creussner, and later on Georg Stuchs, who like Wenssler was remarkable for his service-books. The principal firms at Leipzig from the eighties were that of Konrad Kachelofen and his son-in-law Melchior Lotter and that of Martin Landsberg; from the nineties the firm of Arnold Neumarkt von Köln and his successor Wolfgang Stoeckel and also that of Jakob Thanner.

Besides the printers who remained in one place there were "Wanderdrucker," printers who moved about, like Marx Ayser, who was working from 1483-90 at Nuremberg, in 1491 at Regensburg, in 1492-93 at Bamberg, in 1496-97 at Ingolstadt, and finally at Erfurt. On the other hand there were monasteries which had books printed on their own premises, namely the Benedictines at Augsburg and Erfurt, the Cistercians at Zinna, the Premonstratensians at Schussenried, the

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Augustinian Hermits at Nuremberg, also the Brothers of Common Life at Marienthal and at Rostock. Even a species of private press is not unknown in the fifteenth century. For instance, the poet Folz printed his own poems, and the astronomer Regiomontanus issued the astronomical works of himself and of others, whilst the Regensburg Cathedral architect, Roritzer, produced a pamphlet of his own on architecture and also a few broadsides; other presses were devoted to similar purposes.

At first printers, naturally enough, imitated manuscripts as far as possible and only by degrees learnt a style suitable for a printed book. For instance, the information which we are accustomed to find on the title-page is either wanting or (from the Psalter of 1457 onwards, and in about 40 per cent. of the printed books) is put in a colophon. As early as 1463 Fust and Schöffer printed a book (a German edition of the "*Bulla cruciata*" of Pope Pius II.) with a first page containing the title, but such a first page is not generally met with before the eighties. A title-page, setting out the author and title, place and date, printer and publisher first occurs as late as 1500 in the "*Exercitium super omnes tractatus parvorum logicalium Petri Hispani*" of Johannes Glogoviensis, printed by Stoeckel in Leipzig for Johannes Haller in Cracow. The first printed initials appear in the Psalter of 1457. Therhoernen is usually credited with having introduced printed numbers of leaves (Werner Rolevinck, *Sermo de praesentatione beatissimae virginis Mariae*, 1470) and printed head-lines (Thomas de Aquino, *Quaestiones de duodecim quodlibet*, 1471), Koelhoff with having employed the first

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printed signatures, at least in Germany (in 1472 in an edition of a book of Nider's). The first printed notes from punches may be seen in Johannes Gerson's "Collectorium super Magnificat," issued at Esslingen by Konrad Fyner in 1473, the first notes printed by movable types (in Germany) in a "Missale Herbipolense" of Georg Reyser at Würzburg, 1481. The earliest printed map is found in a Lübeck book of Lucas Brandis ("Rudimentum novitiorum," 1475).

Pfister having led the way in the beginning of the sixties (see Chapter I), illustrations became rather common in German incunabula. Woodcuts prevail, though engravings were used also, *e.g.* in the Missale of Reyser already referred to. Special kinds of illustrations are the title woodcuts, the "Accipies woodcuts" (which represent a master with his pupils), in school-books, being the most remarkable, and the printer's marks which, like other perfections of the art, first appear in the Psalter of 1457. Among the artists we find the "Hausbuchmeister," Wolgemut—the teacher of Dürer—and Dürer himself, who is now often identified with the "Meister der Bergmannschen Offizin." The chief centres for illustrated books are Augsburg and Ulm, but some of the best known come from Mainz (Breidenbach's "Peregrinationes in Montem Syon," illustrated by Reuwich), Nuremberg (the "Schatzbehälter" and Schedel's "Liber Chronicarum"), and Basel (Brant's "Narrenschiff"). The finest illustrated Bibles are those published by Quentell in 1479 (the woodcuts appear once more in the Koberger Bible of 1483) and the Lübeck Bible issued by Stephen Arndes in 1494. At Strassburg at the end of the fifteenth and the

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beginning of the sixteenth century Grüninger produced a series of well-illustrated books.

As in other details printers followed the manuscripts in the style of their types. The types of the 36-line and the 42-line Bibles are in the gothic Textura style, which was especially in favour with service-books. The Indulgence types show two specimens of a German gothic Bastarda which, modified, reappeared after 1472 at Augsburg. The Durandus type is the first of many types of the Gothico-Antiqua style (semi-gothic or semi-roman) which was in use for most books up to the beginning of the eighties. A Bastarda with Gothico-Antiqua elements is found after 1470 in Cologne (Therhoernen, etc.), a Gothico-Antiqua with Rotunda elements at Strassburg (Mentelin) and at Augsburg (Zainer and his followers). Here and there printers experimented with a real Antiqua or Roman letter (at first Rusch in 1464) or the Italian gothic letter, the Rotunda (at first Koelhoff in 1472). In the beginning of the eighties a great change took place. Whereas the Gothico-Antiqua disappears, the Rotunda and the Bastarda become quite common, the former particularly for Latin texts, the latter more and more for vernacular texts. Among the many forms of the Bastarda two prevail: the so-called Upper-Rhine-type (M⁴⁴ of Haebler's *Typenrepertorium*, some of the lower-case letters looped), first introduced by Grüninger (German Bible of 1485), Schöffler (Hortus sanitatis, 1485), and the Cologne printer Renchen (Seelentrost, 1484), and the Schwabacher (M⁸¹ of Haebler), originating in Nuremberg (Creussner, 1485, etc.). The Antiqua about the same time made a new start from Basel (Amerbach, who had learnt in Venice,

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from 1486). The Dutch Lettersnider-type (M⁷⁵ of Haebler) appears in a few Cologne books. Greek and Hebrew types are only occasionally met with in this period, the Greek first in the Cicero of Fust and Schöffer and the Hebrew first in Petrus Niger's "Tractatus contra perfidos Judaeos," 1475, printed by Fyner in Esslingen. There were about 1000 different types in Germany, some three-fourths of the printers having between 2 and 15 types; about fifty printers only having 1 type and ten having more than 15 types.

LITERATURE: *Ernst Voulliéme*: Die deutschen Drucker des fünfzehnten Jahrhunderts, 2. ed. Berlin, 1922.—*Alfred W. Pollard*: Introduction to the third part of the Catalogue of books printed in the fifteenth century, now in the British Museum. London, 1913.—*Robert Proctor*: An index to the early printed books in the British Museum. London, 1898–1903.—*Konrad Haebler*: Typenrepertorium der Wiegendrucke, 1, 3–5. Halle a. S., then Leipzig, 1905–24 (Samm- lung bibliothekswissenschaftlicher Arbeiten, 19, 20, 27, 29, 30, 39, 40).—*Ernst Voulliéme*: Der Buchdruck Kölns bis zum Ende des fünfzehnten Jahrhunderts. Bonn, 1903 (Publika- tionen der Gesellschaft für rheinische Geschichtskunde 24).—*Charles Schmidt*: Répertoire bibliographique Strasbourgeois jusque vers 1530. Strasbourg, 1893–1910.—*Karl Stehlin*: Regesten zur Geschichte des (Baseler) Buchdrucks bis zum Jahre 1500. Leipzig, 1888–89 (Archiv für Geschichte des deutschen Buchhandels, 11, 12).—*Oskar Hase*: Die Koberger, 2. ed. Leipzig, 1885.—*Alfred Hessel*: Von der Schrift zum Druck. Leipzig, 1923 (Zeitschrift des deutschen Vereins für Buchwesen und Schrifttum 6).—*Robert Alexander Peddie*: Fifteenth-century books. London, 1913.—And the general works on incunabula (*Burger, Copinger, Haebler, Hain, Peddie, Pollard, Proctor, Reichling, Schreiber, Voulliéme*, etc.).

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III. THE SIXTEENTH CENTURY

Some two hundred dated books and about one hundred broadsides printed in 1500 have survived, though certainly much has been lost. These were issued by some fifty offices (out of sixty existing) at twenty-one places. Two-tenths of the books are in folio, seven-tenths in quarto, one-tenth in octavo; one-sixth of the books and two-thirds of the broadsides in the vernacular, the rest in Latin. Of about two hundred types one-third were larger types for head-lines or service-books and two-thirds smaller ones for ordinary book work. The larger types were half Textura, half Rotunda, the smaller types two-thirds Rotunda and one-third Bastarda (half the Upper-Rhine type, half the Schwabacher), only a few types in a few books being Antiqua and other variants, for Latin texts Rotunda, for German texts Bastarda being preferred. The places on the Rhine were Basel (Amerbach, Froben, and five other printers), Strassburg (Grüninger, Flach, Husner, and six others), Hagenau (Gran), Spires (two), Mainz (two), Cologne (Quentell, and six others). In South Germany Pforzheim (one), Tübingen (Otmar), Ulm (two), Augsburg (Schönsperger, Ratdolt, and three others); Sursee, near Lucerne (one), Memmingen (one), Vienna (Winterburg); Nuremberg (Koberger, Stuchs, and three others), Würzburg (two), Bamberg (Sensenschmidt). In North Germany Erfurt (Schenck, and two others), Leipzig (Lotter, Stoeckel, and two others), Magdeburg (two), Lübeck (two), and Rostock (one). The largest output belonged to Strassburg, Hagenau, Cologne,

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Nuremberg, Basel, Augsburg, and Leipzig, most of the books in the German language being printed at Augsburg and Strassburg, many broadsides in the vernacular also at Nuremberg and Memmingen. Of the Bastarda the places on the Rhine preferred the Upper-Rhine type, Nuremberg and the North the Schwabacher. Augsburg, Pforzheim, and Ulm had both, using the Upper-Rhine type more for Latin, the Schwabacher more for German books.

The invention of the art of printing was one of the events which put an end to the middle ages. In the sixteenth century the art of printing itself was greatly influenced by two other such events, the Reformation and the discovery of America and of the sea-route to India. The Reformation was a matter which concerned the whole nation, and was discussed again and again: many more books and especially pamphlets were needed, and those in the vernacular much more than those in the classic languages. Clandestine presses and anonymous publications were common. Wittenberg became suddenly a centre of religious Germany, whereas places in South Germany lost by degrees much of their commercial importance.

The sixteenth century saw the art of printing spread through the whole country. The most remarkable places to which it came in that century are Wittenberg and Frankfort-on-Main. Cologne, Strassburg, and Leipzig ranked among the first throughout the whole century, Strassburg being at its highest point in the beginning, Leipzig at its lowest point in the twenties and thirties. Basel, being at its height in the time of Erasmus, lost its place among the first in the last quarter of the century. Wittenberg was

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at the head in the time of Luther and Melanchthon, and remained among the first down to the end of the century. Frankfort-on-Main only attained an important position in the second third of the century and a predominant one in the last third. Augsburg and Nuremberg, Hagenau and Vienna were among the first in the beginning, Ingolstadt and Tübingen at the end of the century, Zürich in the time of Zwingli.

At Cologne, Quentell died in 1501, but the family carried on the office with success down to the seventeenth century. Another firm which was flourishing for more than a hundred years was that of the Gymnich (1516-1665), publishers as well as printers. In the sixteenth century we would also mention Eucharis Hirzhorn or Cervicornus (1516-43), renowned for the good quality of his work, Johannes Heyl or Soter (1518-38), who even printed in Hebrew, Ethiopian, and Chaldean, and Jaspar von Gennep (1532-64), author as well as printer.

At Strassburg we find Grüninger up to 1531. Prüss, who died in 1510, was succeeded by Renatus Beck (1511-22), whereas Johann Prüss the younger had a press of his own (1512-46). Martin Flach, the younger, too, founded a new office (1501-25), whereas Johann Knoblouch married the widow of Martin Flach, the elder (d. 1500), and so became his successor as printer. Other important printers in the earlier decades of the sixteenth century were Matthias Hupfuff (1498-1520) who, especially, produced popular books, and the two scholar printers, Matthias Schürer, a nephew of Flach (1508-21), and Johann Schott, a grandson of Mentelin (1500-48). Bernhard

Germany

Jobin, printer for his brother-in-law Fischart, was the most prominent man in the last decades of the century (from 1570).

At Leipzig, besides Lotter, Stoeckel, Landsberg, and Thanner already mentioned, Valentin Schumann was working from 1513. They printed many classics, Lotter, the most conspicuous of them, also producing a good many valuable service-books. During the first years of the Reformation much Protestant literature left the presses, but Duke George of Saxony's anti-Protestant attitude resulted in a great decay of the art from 1522 to 1539, the year of the Duke's death. After that time Valentin Bapst (d. 1556) and his son-in-law, Ernst Vögelin (at Leipzig till 1576, d. 1589 at Neustadt-an-der-Haardt), had by far the best printing plant, also remarkable for editions of the classics.

Basel, where Amerbach, Froben, and Johannes Petri were working together in the first dozen years of the sixteenth century, reached the culminating point of its printing career in the twenties, during the friendship of Froben, "*omnium chalcographorum princeps*" (as Martin Dorp calls him), with Erasmus of Rotterdam. After Froben's death in 1527, his son, for some time in association with Herwagen and with Episcopius, and his grandsons, carried on the firm till 1603. Another great family of printers are the Petri: Adam Petri (a nephew of Johannes), who in particular printed Luther's works, his son Henricpetri (knighted by the Emperor, d. 1579), and his grandsons. Johannes Oporinus (d. 1568) was a scholar printer like Froben and a man of similar importance. Valuable editions of the classics, in earlier years also of

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the Bible and of the patristic writers, were typical of most of the noted Basel printers of this period.

The glorious days of Augsburg and Nuremberg as printing centres continued through the reign of the book-loving Emperor Maximilian I. (d. 1519) down to the time of the Reformation. Schönsperger and Ratdolt and Stuchs kept ahead of their colleagues in the beginning of the sixteenth century, whereas the Kobergers soon became publishers only. Schönsperger especially was connected with Maximilian; he printed his splendid prayer-book and the *Teuerdank*. The Nuremberg press, which printed Dürer's famous works, was probably in the hands of Hieronymus Andreae Formschneider. Sigmund Grimm, a physician, and Marx Wirsung, a merchant, who had Simprecht Ruff printing for them, Johann Miller, Erhart Öglin, Heinrich Steiner may be named among the new men in Augsburg; Johann Petrejus and Friedrich Peypus among those in Nuremberg. Both places also were headquarters of clandestine presses, *e.g.* that of Philipp Ulhart in the former town and that of Hans Hergot in the latter; for one of his pamphlets in 1527 Hans Hergot was beheaded at Leipzig.

The end of Maximilian's reign also saw the printing art in Vienna reach a fairly high standard through the activity of Hieronymus Vietor (later on in Cracow) and Johann Singriener (d. 1545) who, from 1510, had been working together until 1514 and afterwards apart. The art revived once more about 1560, when Michael Zimmermann (1553-65) and Raphael Hofhalter or Skrzetuski, a Pole (1556-63), had their presses there; Zimmermann was the first to print in Arabic (1554) and in Syriac (1555) letters.

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Hagenau was among the most prominent printing towns from the end of the fifteenth century to the thirties of the sixteenth, and Zürich from the twenties of the sixteenth century to the sixties. Hagenau owes this honour to Heinrich Gran (1489-1527), a prolific printer of theological books in the Latin language and Rotunda types, and to Thomas Anshelm who here ended a long and important career (d. 1523) and his successor Johann Setzer (d. 1532), a friend of Melanchthon. Zürich at its summit is represented by Christoph Froschauer, the printer of Zwingli and his followers, and of many Bibles. Several English books also were printed here, certainly Coverdale's Bible of 1550 and possibly that of 1535, by Froschauer, two pamphlets in 1543 by two Englishmen, the one by Oliver Jackson and the other by Richard Wyer.¹

The fact that Luther was living at Wittenberg, and the fact that the Leipzig printers for about two decades were not allowed to print Protestant books and pamphlets resulted in a marvellous rise in the printing art at Wittenberg from 1517. In this year only one printer was working here, from 1519 there were two, from 1521 four and more. The first capable one among them was Melchior Lotter, the younger, a son of the Leipzig printer (1519-24); the first edition of Luther's New Testament, the so-called September Bible (1522), came from his press. The master of all was Hans Lufft (1523-84), who printed the first complete Luther Bible (1534) and is said to have printed

¹ The earliest known complete English New Testament was printed 1525-26 by Peter Schöffer the younger, at Worms, a first essay at Cologne having been stopped by the authorities. The books which are said to be printed at Marburg by Hans Luft were really printed at Antwerp by Johannes Hoochstraten.

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about 100,000 copies of editions of the Bible in all. In consequence of the printers' undervaluing the demand for the Reformation pamphlets in the beginning of the religious struggle, and in consequence of the growing fear of pirated editions, these pamphlets, and particularly those of Wittenberg—the number of which is extraordinarily great—are often remarkable for special features which make them a difficulty to bibliographers: apparently identical editions turning out to be different on account of an increase in the number of copies during printing or for similar reasons, necessitating resetting of a part of the work.

Frankfort-on-Main, which had been a centre of the book-trade in the fifteenth century, shows a similar rise of the printing art to that at Wittenberg, only some time later. The first important printer was Christian Egenolff (a relative of Steiner at Augsburg), who in 1530 removed from Strassburg to Frankfort and died in 1555 after having printed several hundred, and among them many valuable, books. In the middle of the century we also find Cyriacus Jacob (1533–50/51) and his successor David Zöpfel (1551–63), Peter Braubach (1540–67), who chiefly printed Protestant literature, and Hermann Gülfferich (1540–54), who preferred popular pamphlets. The greatest name in the second half of the century is that of Sigmund Feyerabend (1560–90), but he was more a publisher than a printer. Besides him, we must mention Nikolaus Bassée, an immigrant from Valenciennes (1561–99), and Andreas Wechel, an immigrant from Paris (1572–81), and his sons-in-law, Johann Aubry and Claude de Marne (from 1596 at Hanau).

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Ingolstadt and Tübingen had a comparatively large output of books in the seventies and eighties, David Sartorius in the former and Georg Gruppenbach in the latter being the busiest printers.

There were in the sixteenth century, as in the fifteenth, printing presses in monasteries, *e.g.* in the Benedictine abbeys of Wessobrunn (1503), Ottobeuren (1509), and of Tegernsee (from 1573). From the second half of the century the Jesuits took a particular interest in typography; they had a printing establishment of their own in Vienna from 1559 to 1565. There were also, as in earlier days, many private presses, particularly of scholars, *e.g.* that of the Professors Nikolaus Marschalk (at Erfurt, Wittenberg, and Rostock, d. 1525), Ambros Lacher at Frankfort-on-Oder (1506-11), and Peter Apianus at Ingolstadt (d. 1552), of Paul Fabius, clergyman in Isny, who printed Hebrew books especially (1538-43), and of Duke Boguslaw XIII. of Pommerania at Barth (or Bard, from 1582). The printing-office of Leonhard Thurneysser at Berlin (from 1574) too may be mentioned here. The most important private press was that "ad insigne pinus" at Augsburg (1594-1619), at which were printed a number of valuable works under the superintendence and at the expense of Marx Welser and his friends.

Frequently enough, though not so frequently as in the fifteenth century, one man or one firm carried on the trade of printer as well as publisher and also type-founder in the sixteenth century. But we also find men or firms who were publishers only, *e.g.* the brothers Alantsee (1505-22) at Vienna, Gottfried Hittorp (from 1511) at Cologne, Ludwig Hornken of

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Cologne, from 1512 at Leipzig. Also at the time the establishment of Egenolff in 1572 was divided among the heirs, Jakob Sabon received the type-foundry as his share and carried it on as a separate firm. A great disadvantage to the printers at that time was the censorship. From the very outset of the century orders concerning the censorship appear, sometimes for a single town, sometimes for a single country, and occasionally for the empire as a whole. An advantage gained by single printers was that privileges were given to them by the authorities, preventing other people from printing and selling either a particular book at a certain time or even any book whatever in a special district. As to the general appearance of the books, smaller sizes were more and more preferred; title-pages become common in the course of the century, whereas colophons disappear by degrees.

Books were now printed in many languages and with many kinds of type, Greek, Hebrew, and Oriental. Books in Low German were chiefly printed at Rostock (Ludwig Dietz), at its height in the twenties, Magdeburg (the most prominent town in this respect, being eminent in the thirties), Lübeck (Johann Balhorn), at its height in the forties, and Hamburg (eminent in the nineties). A press which was especially remarkable among those printing works in out-of-the-way languages and with uncommon types is one which issued Slavic books at Tübingen, Reutlingen, and Urach during the second half of the century. Wendish, Croatian, and Dalmatian New Testaments, religious hymns, and theological works were printed partly with Roman, partly with Cyrillic and Glagolitian letters. A Carniolan protestant clergyman, Primus Truber:

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an Italian heretic bishop, Paolo Vergerio; and a German baron, Hans Ungnad Freiherr von Sonnegg, were the principal promoters: the types were cut and founded by Johann Hartwach and Simon Auer, both of Nuremberg.

With regard to types; those of the fifteenth century, which survive the end of that century, are Textura and Lettersnider-type, Rotunda and Antiqua, Schwabacher and Upper-Rhine-type. The Lettersnider-type occurs only in a few Münster and Hamburg books. The Textura remains in use as type for title-pages till the middle of the century and then disappears. The Rotunda as text type is soon replaced by Antiqua and Italics for Latin texts and reaches the second half of the century only as type for title-pages, disappearing not much later than the Textura. The above-mentioned Italics (in Germany called Cursive) are introduced into Germany in 1510 (Sebaldus Stribilita in Erfurt)¹ and become commoner in the twenties. At Zürich, at Strassburg, and at Augsburg attempts are made also to print German texts with them, especially Bibles, but without success. In 1553 Wolfgang Fugger states that it will not look well to use Latin letters (*i.e.* Antiqua or Cursive) for German texts. For these in the first half of the century Schwabacher and its modifications, Upper-Rhine type and Wittenberg letter, are preferred. The Wittenberg letter (M⁴⁸ of Haebler's Typenreperitorium, some of the capitals rather swollen) is first found with Lotter at Leipzig from 1508 (Proctor :

¹ The "Adagia" of Erasmus, printed by Froben in 1513, is generally regarded as the earliest book in Italics in the German-speaking countries; but this is an error.

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type 11) and with Thanner (Proctor : type 6) soon afterwards. Melchior Lotter, the younger, brings it to Wittenberg (Proctor : type 3) where it is in vogue for the pamphlets of Luther and his adherents ; we meet it also in the neighbourhood, *e.g.* at Magdeburg. In the second half of the century Schwabacher and its modifications are more and more replaced by the Fraktur. A kind of Fraktur already appears in three Schönsperger types : the Gebetbuch type (1514, Proctor : type 12), the Teuerdank type (1517, Proctor : type 13), the Gilgengart type (1517, Proctor : type 14), the first being the largest, the last the smallest of them. They spread very quickly through the country, the Gebetbuch type, and especially the Teuerdank type, remaining during many decades a very popular type for title-pages. Another kind of Fraktur used by Grimm and Wirsung (two types, Proctor : types 12 and 14) about the same time were a failure. The real Fraktur is first found in 1522 in the text of Dürer's "Triumphal Car," in 1524 with Cranach and Döring at Wittenberg and Petrejus at Nuremberg (smaller), and with Wolf Köpfel at Strassburg (larger). At the end of the sixteenth century only four kinds of types remain : Antiqua and Cursive for Latin texts (and for non-German words or even parts of words in German texts) and Fraktur and Schwabacher for German texts, Cursive and Schwabacher in general only used for a few words which the printer wished to mark out of the rest of the text. According as the number of kinds of types diminishes, we meet the same kind of types in a great number of sizes. A Specimen of the type-founder Konrad Berner (a successor of Egenolff) at

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Frankfort-on-Main (1592), *e.g.* for Roman letters, Greek letters, and Italics shows: Canon, Petit Canon, Parangon, Gros Text, S. Augustin, Cicero, Garamond (or Immortel), Galliard, Petit Text, and Nonpareil.

A particularly interesting feature of many books in the sixteenth century are their illustrations; illustrations in a narrower sense as well as borders (during the earlier decades) and devices. Important artists—among others—were then working for printers, publishers, and book lovers. The Emperor Maximilian employed for his books men such as Albrecht Dürer (1471–1528), Hans Springinklee (who died about 1540), and Hans Schäufelein (before 1490–1539/40) at Nuremberg, Hans Burgkmair (1473–1531) and Leonhard Beck (about 1480–1542) at Augsburg. The Nuremberg printers (Peypus, etc.) too had at their disposal Dürer, Springinklee, Schäufelein, and Peter Flötner (about 1485–1546), the Augsburg printers (Schönsperger, Otmar, Grimm and Wirsung, Steiner) Burgkmair, Beck, Schäufelein, Daniel Hopfer (about 1470–1536), Jörg Breu, father and son (about 1480–1537; shortly after 1510 until 1547), and Hans Weiditz (the master of Petrarch). At Wittenberg, Lucas Cranach (1471–1553), who was a publisher as well as an artist, is a prominent figure; at Cologne, and with Quentell, etc., Anton Woensam von Worms (who died before 1542) was eminent; and at Frankfort-on-Main, and with Egenolff, Hans Sebald Beham (1500–50) is notable. Illustrations of the Strassburg artists Hans Baldung Grien (about 1480–1545) and Hans Wechtlin (who died in 1530), also of Hans Weiditz, Schäufelein, and Graf are met with in the

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books of Strassburg printers. The Basel printers prefer Urs Graf (about 1485-1527/28), Ambrosius and Hans Holbein (1494-1519?; 1497/98-1543), the Basel artists, but also use illustrations of Schüpfleins; very remarkable are the woodcuts of the unknown master D. S. In the later part of the century Virgil Solis (1514-62) and Jost Amman (1539-91) at Nuremberg, and Tobias Stimmer (born 1534) at Strassburg, appear as the most noted book-illustrators, all three particularly in connection with Feyerabend. At this time engravings take the place of woodcuts more and more frequently.

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IV. THE SEVENTEENTH AND EIGHTEENTH CENTURIES

The seventeenth century is the least interesting and the least known century in the history of printing in Germany. At the end of the sixteenth century the books were worse than they had been some decades earlier ; paper and letters, illustrations and contents had become rather poor. The thirty years' war ruined the book-trade as well as other trades. In 1600, 791 books were sent to the book fairs of Leipzig and Frankfort from German towns ; in 1613 there were no less than 1358 ; and in 1635 only 286. The highest figure after that year was 1215 in 1698 ; in 1700 there were again no more than 951. Also the competition of foreign, particularly Dutch, printers turned out to be very detrimental to the German ones of this period.

At the beginning of the century Leipzig was at the head of the book-trade, Frankfort and Cologne coming next, Strassburg and Nuremberg and Wittenberg being less important. In the middle of the century Frankfort and Cologne took the first places, leaving only the third to Leipzig ; Strassburg and Nuremberg came next, whereas Wittenberg lost its importance during the thirties. At the end of the century Leipzig regained its former position, and Frankfort was second, whereas Cologne and also Strassburg terminated their glorious period of two centuries about 1670 ; in the same time Nuremberg kept and Jena and Dresden won a place just below the two centres of the book-trade.

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Among the printers of this century the best known are: at Leipzig, Abraham Lamberg (1587-1629), Henning Gross (printer from 1604), Gregorius and Timotheus Ritzsch (1624-43; 1638-78); at Frankfort the newspaper printers Schönwetter (from 1598) and Latomus (from 1599), the Bible printer Balthasar Christoph Wust (from 1654, about 100,000 Bibles, like Lufft in the sixteenth century), and the Andreae family (from 1666); at Cologne, Gerhard Grevenbruch (1583-1642), the families Hierath (1580-1690), Kinckes (1605-1705), Egmondts (1622-1720), Hilden (1626-1750), and Metternich (from 1629); at Nuremberg, the Endter family (from 1604). Among private presses that of the Oriental scholar Peter Kirsten, at Breslau 1608-10, and that of the camera-list Georg Engelhard Löhneyss at Remlingen and Zellerfeld, 1609-24, are noteworthy.

Frequently printers were publishers as well. But it became gradually more and more unusual for the same man or firm to be printing as well as type-founding. Whilst Fuhrmann (type specimen 1616) and the Endter at Nuremberg and the Pistorius at Basel combined both, the Fievet (later on Schmidt) foundry at Frankfort and the Genath foundry at Basel became independent in the seventeenth and early in the eighteenth century respectively; the Berner and Luther at Frankfort, the Baumann and Hartwig at Nuremberg, and the Lobinger at several places being type-founders only.

From the end of the sixteenth century the printing trade was governed by strong regulations. Printers were formed into societies, corporations, or guilds. The apprentices had to learn their trade for a period

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of from four to six years in a prescribed manner, and were only promoted to be journeymen when they obtained their postulate, *i.e.* having gone through the prescribed ceremony of the Depositio. Only a restricted number of masters were privileged and allowed ; many, perhaps most, of them were officials to a court, a town, or a university. The printing of poems or sermons on the birth, wedding, or death, etc., of more or less prominent people prevailed. The censorship remained in vogue. The authorities even gave orders concerning the prices of printing.

A few words will be sufficient to describe the outer appearance of books at this period. The title-pages are rather crowded with words, and title as well as text looks very black and heavy. The elaborate initials and the grave ornaments again emphasise the pompous "baroque" style of that age. The types do not change much, but the system of sizes develops. Fraktur and Schwabacher, Antiqua and Cursive were employed about the year 1700 in the same way as about 1600. But from the last quarter of the century books in the German language began to prevail among those sent to the fairs, and so the kind of types used for them, Fraktur and Schwabacher, did the same. From time to time somebody, *e.g.* the reformer of poetry, Opitz, in one of his first books, tried Antiqua or Cursive for the vernacular, but, as in the sixteenth century, without success. The best illustrators were Jakob van der Heyden (1573-1645) at Strassburg, renowned for his portraits, Johann Matthias Kager (1575-1634) at Augsburg, Andreas Brettschneider (born about 1578) and Johann Faber (born about 1610), both working for Henning Gross

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at Leipzig, the de Bry's and Merian's at Frankfort-on-Main, famous for their prospects of cities, and publishers as well as engravers, and the well-known artists Joachim Sandrart (1606-88) and Wenzel Hollar (1607-77).

The beginning of the eighteenth century simply follows the rut of the seventeenth, yet we see a new course taken soon after Frederick the Great's accession to the throne. In 1709 for the first time, and without interruption from 1765, more books from German places were sent to the book fairs than in 1613 (1358) before the great war. From 1776 there were more than 2000, from 1787 more than 3000, and the century culminates in 1800 with 3906. Leipzig is the centre of the book-trade through the whole century, its own output being between twice and thrice as large as that of the place next below it. In the first half of the century Frankfort and Nuremberg, Dresden and Jena and also Halle (where in 1694 a new university had been established) were the more important places besides Leipzig. In the second half of the century rather suddenly Berlin becomes second, whereas Frankfort and Nuremberg and Halle keep their position and Dresden and Jena fall back. Vienna becomes third during the reign of Joseph II.

The Breitkopf, father and son, at Leipzig have by far the greatest names in this century. The son, Johann Gottlob Immanuel Breitkopf (d. 1794), was a man who collected books and studied the history of printing, and a man of experiments and inventions too; he invented a new system for printing music notes and one for printing maps with movable types. Wilhelm Haas at Basel and Johann Friedrich Unger

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at Berlin were similar men. To Wilhelm Haas the elder (d. 1800) we owe a new map-printing system schemed at the same time as that of his rival at Leipzig, and a new (iron) form of the printing press. Johann Friedrich Unger (d. 1804), a collector of books relating to the history of printing and a student of this history and interested in music note printing like Breitkopf, was particularly known for fine and fashionable printing. The same may be said of Georg Joachim Göschen at Leipzig (d. 1828). The largest printing house at Berlin belonged to Georg Jakob Decker, father and son (d. 1799 and 1819 respectively). Among the Viennese printers Johann and Johann Peter van Ghelen (died in 1721 and 1754 respectively), Johann Thomas Trattner (1748-98), and Joseph Lorenz Kurzböck (1755-92) are most noteworthy. In Frankfort a new important printing family, the Brönner (from 1727), must be mentioned, who were well known for their Bibles and theological books. Many and cheap Bibles were printed from 1712 in the "Cansteinsche Bibelanstalt" at Halle, a large printing plant erected especially for that purpose. It may be worth noting that Lessing, 1767-68, was the joint possessor of a printing-office, where some of his works were printed, and that Joseph II. in his youth had studied printing with Trattner.

Not only printing and type-founding, but also printing and publishing now become more and more separated professions and trades. But it is remarkable that precisely the most prominent firms combine the several branches once more. Though the conditions under which printing was executed did not change fundamentally, and though Haas, for ex-

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ample, being no trained printer, was not allowed to work his new press himself, the censorship under Frederick the Great and Joseph II. became less severe than before. Printing for literary purposes gained ground over that intended for private affairs, and the abuses connected with getting the postulate were done away with by Breitkopf and others. The first printers' journal appeared in 1775: "*Der Buchdrucker*," edited by Johann Ludwig Schwarz.

In the first decades of the century books looked very similar to those of the preceding period. One of the few well-printed books at this time is the folio edition of Neukirch's translation of Fénelon's "*Telemachus*," printed by Johann Valentin Lüders at Ansbach in 1727. In the middle of the century the delicate "rococo" decorations then in vogue abroad appear in the German books too, and the titles become as short as they are to-day. In the last decades the decorations disappear and the types alone remain, Baskerville and Bodoni and, before all, Didot being the model. Unger and Göschen (and his type-founder Prillwitz at Jena) as well as others made the light Roman letter of Didot popular in Germany; and the Unger Fraktur—then and nowadays very often used—is a gothic type showing the Didot touch. About 40 per cent. in 1700, about 25 per cent. in 1750, and only about 5 per cent. in 1800 of the books sent to the fairs were written in the Latin, French, Italian, or English language, and thus printed in Antiqua or Cursive. But the decline of these types displayed by these figures was somewhat arrested by the fact that about the middle of the century a serious movement began with the inten-

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tion of replacing the Fraktur by the Roman letter for German texts. The Roman letter was used by preference in fine books of poetry printed at Berlin and Zürich, and later on throughout the country. An example of this at the end of the century is Goethe's "Römisches Carneval," printed by Unger, and Göschen's splendid editions of the works of Wieland and Klopstock. The following may be noted among the most remarkable illustrators of this century, namely Georg Friedrich Schmidt (1712-75), who decorated several works of Frederick the Great in the French style of his time, the poet Salomon Gessner at Zürich (1730-88), the brothers Johann Heinrich and Johann Wilhelm Meil at Berlin (1729-1803, 1733-1805), and the master of them all, Daniel Chodowiecki (1726-1801).

LITERATURE: Besides the books already mentioned in Chapter III:—*Paulus Pater*: De Germaniae miraculo optimo, maximo, typis literarum, earumque differentiis, dissertatio. Lipsiae, 1710.—*Johann Heinrich Gottfried Ernesti*: Die wol-eingerichtete Buchdruckerey. Nürnberg, 1721, 2. ed., 1733.—*Christian Friedrich Gessner* and *Johann Georg Hager*: Die so nöthig als nützliche Buchdruckerkunst und Schriftgiesserey. Leipzig, 1740-45.—*Johann David Werther*: Warhafftige Nachrichten der so alt- als berühmten Buchdrucker-Kunst. Franckfurth und Leipzig, 1721.—*William Blades*: An account of the German morality-play, entitled "Depositio Cornuti Typographici." London, 1885.—*Oskar von Hase*: Breitkopf und Härtel, 4. ed. Leipzig, 1917.—*August Pott-hast*: Geschichte der Familie von Decker und ihrer Königlich-Geheimen Ober-Hofbuchdruckerei, with an Introduction "Geschichte der Buchdruckerkunst zu Berlin im Umriss" (unfinished, about 1869-70, the Introduction edited, Berlin, 1926.—*Viscount Goschen*: The Life and Times of Georg Joachim Göschen. London, 1903.

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V. THE NINETEENTH CENTURY AND AFTER

“ In all essentials the printing-office of 1800 was the printing-office of 300 years before. Everything we know to-day in the art has come into use since 1800. The printed sheet of to-day is printed on machine-made paper. It is either set by a machine or set with machine-made type. It is either printed from this type or stereotyped by machinery. The press is a power press, and the resulting printed sheets are sewn, glued, and bound by machinery.” Thus Robert Alexander Peddie (“ An Outline of the History of Printing,” London, 1917, page 17) describes one of the fundamental differences between the printing of former times and that of the nineteenth century and after. Add the increase of population in Germany (1816, 25 millions; 1910, 65 millions) and its immensely larger demand for books, and especially journals and newspapers on the one side and the removal of most of the social restrictions and artistic traditions on the other side, and you will understand what a change must have taken place.

The figures for book-production (only books and journals as far as the book-trade is concerned) in Germany are: 1800, 3906; 1840, more than 10,000; 1913, more than 28,000; 1922, more than 35,000. There were 2253 printing plants in 1873, more than 5000 from 1897, more than 8000 from 1911, 8615 in 1913, and 8196 in 1924. The number of the chief machines used in these plants grew from 8346 in 1886 to 37,866 in 1913, and 40,975 in 1924. The number of people (as far as can be ascertained from those

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insured) employed in them was 80,250 in 1893, 186,218 in 1913, and 166,068 in 1924. In 1924, of all printing firms 66·9 per cent. had 1-10 working men (and women), 25 per cent. 11-50, and 8·1 per cent. more than 50. But these 8·1 per cent. large offices alone employed 60·6 per cent. of the insured persons, the 25 per cent. medium offices 27 per cent., and the 66·9 per cent. small offices only 12·4 per cent.

In the first decades of the nineteenth century the principal places of book-trade were Leipzig, Berlin, Vienna, and Frankfort. Later on Berlin was ahead of Leipzig, and Hamburg and Dresden, Munich and Stuttgart too became places of first importance in the printing art.

When in the eighties Faulmann and Lorck wrote their books on the history of the printing art, there were printing houses in no less than 1300 German towns. At Berlin the plant of Decker, which had kept its prominent place, had been united with the Prussian State printing-office in order to build up the Reichsdruckerei; next to Decker came Büxenstein (from 1852). At Leipzig, besides Breitkopf & Härtel, the Teubner (from 1811), Tauchnitz (from 1797), and Brockhaus (from 1818), had gained a famous name. At Vienna the Hof- and Staatsdruckerei (from 1804; conducted by Degen until 1827, by Auer 1841-66) was the leading office. At Dresden the house of Meinhold; at Munich, Knorr & Hirth; at Stuttgart, Cotta and Hallberger, were noted firms. Frankfort and Hamburg were known for their type-foundries: Krebs and Bauer and Flinsch at the first, Genzsch & Heyse at the latter city. Hänel at Berlin, Schelter & Giesecke at Leipzig, being their chief

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rivals, Berthold at Berlin then specialising in brass rules. During the last half century, the period which we regard as contemporary, many other great firms came into existence; the rapidly growing newspapers especially caused the development of several giant plants. On the other hand, William Morris opened the way for small artistic presses in Germany, as well as England, such as the Steglitzer Werkstatt (from 1900, Ehmcke, Kleukens, Belwe), the Janus Presse (from 1907, Leipzig, Poeschel and Tiemann), the Ernst Ludwig Presse (from 1907, Darmstadt), and many others founded in more recent years.

The postulate (see Chapter IV) and the whole ancient organisation of the printing-trade were abolished early in the nineteenth century, and shortly afterwards employers and employees existed, as in other trades. A social unrest accompanied the political revolution of 1848; Berlin saw the first printers' strike on the 28th April of that year. Other social conflicts followed. In 1866 the employees founded an association of their own (Verband der deutschen Buchdrucker, in 1866 with more than 3000, and in 1924 with about 60,000 members), in 1869 the employers did the same (Deutscher Buchdruckerverein, in 1869 more than 400, in 1919 more than 5000 members). The struggles of the next few years resulted in a lock-out in 1873. But employers and employees came to terms, and the printers' tariffs (first period 1873-91, second period 1896-1922, third period from 1923), and their stipulations concerning the conditions of working, have been a model for other trades.

The question of Antiqua or Fraktur type has been a subject of discussion up to the present day. Antiqua

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lost ground in the poetical literature, but gained the more in the eyes of scholars. Of the books published in 1881 38 per cent. were printed in Roman letter and 62 per cent. in Fraktur. As to the style of letters, those of Walbaum, father and son, at Weimar were much in vogue from the earlier years of the nineteenth century. Then came the revival of old styles, in types as well as in furniture, as well as in architecture. Of book-illustrators we must at least mention Adolf Menzel (1815-1905), the greatest, and Ludwig Richter (1803-84), the most popular of them.

After the "poor but honest" books of the early nineteenth century and the books "at once so cheap and so pretentious" of 1850-80 (Updike), we enter the present period, which is not yet finished and of which a history therefore is not yet possible. The "neue deutsche Buchkunst" (Loubier), deeply influenced by Morris, aspires to the production of books in which paper and ink and type and illustration are good in themselves and all in harmony with one another as well. Therefore, we see artists and type-foundries especially again and again striving for a new and perfect type-face. The movement has not yet come to an end, but we hope that a new German book art will really be the result.

LITERATURE: Besides the books already mentioned:—
Julius Blach: Die Arbeits- und Lohnverhältnisse im Deutschen Buchdruckgewerbe, 1914-25. Halberstadt, 1926.—
Hans Loubier: Die neue deutsche Buchkunst. Stuttgart, 1921.—
Julius Rodenberg: Deutsche Pressen. Zürich, Wien, Leipzig (1925).

ITALY

BY G. FUMAGALLI

I. If Italy cannot seriously dispute with Germany the glory of the invention of printing, yet, in the history of typography she holds a place of which she may be justly proud. In Italy, so marvellously prepared by the Renaissance to welcome the new art, printing was immediately received with enthusiasm and spread with an extraordinary rapidity which was unequalled in any other country. Proctor's Index cites 51 German cities which had printing works in the fifteenth century, 39 French, 24 Spanish, 14 Dutch, 8 Swiss, 7 Belgian, and 73 Italian. The Italian editions published in the same century, and of which he gives a catalogue, are 4157, while only 3232 are registered for Germany and 998 for France. Rome, Florence, Bologna, Milan and Venice quickly became universal centres for book commerce, Venice in particular, and she remained the chief book market in the world for several centuries.

In Italy, more than in any other country, printing developed in importance, elegance and beauty. The tiny plant, torn from the hard soil of Germany and transplanted to the fertile land of Renaissance Italy, produced there more delicate flowers and fruit of richer flavour. In fact, printing owes its perfection to Italy more than to any other country. The Roman characters, which are those used to-day by the

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printers of the civilized world, were born there from the imitation of the writing of the early humanistic manuscripts ; from thence the art of book illustration sprang and rose to its highest perfection ; finally it was in Italy that the printing of music, and of the Greek and Oriental characters, were invented.

II. In Italy, no less than in Germany and in Holland, there were printers of xylographic or block-books before the introduction of movable type : but there is little mention of them, and what there is refers solely to those in Venice. In 1447 and during the following years a master miniature artist, Giovanni di Biagio of Bologna, " made moulds for the printing of Donati and Salterii," but nothing remains to us of these little books which were destined to have an ephemeral life. Prince d'Essling, however, discovered in the Prints Room at Berlin a small xylographic volume containing a series of prints on the Passion. This copy, which is the only one known, is certainly mutilated and contains only eighteen woodcuts, which Essling believed to be engraved in Venice about 1450, and which reappear cut down in a rare edition of " Devote Meditationi," printed in Venice in 1487. It is, therefore, the first Italian block-book on record, since the few others that are known belong to the sixteenth century. It also furnishes a proof that wood-engraving must have taken firm root in Venice from that time, since it survived the introduction of movable type for many years.

. III. It is now definitely accepted that Italy cannot seriously contest with Germany for the honour of having invented movable type. Nevertheless, just as Holland had her Coster, so in Italy, between 1860

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and 1890, flourished the legend of Pamfilo Castaldi, of Feltre, in the district of Belluno, to whom an ancient and obscure chronicle of the seventeenth century attributed the honour of having invented the movable type, and to whom his native town raised a monument in 1868. In this tardy testimony (Cambruzzi's "*Storia di Feltre*" was printed in 1674) and in certain documents which were found in the archives of Milan, Venice and Belluno, etc., was fabricated the legend which later researches do not corroborate. It is, however, proved that Castaldi was one of the earliest Italian printers, perhaps the first, and in the same way as Bernardo Cennini and Clement of Padua—as recorded—Castaldi may have arrived on his own account at *re-inventing* printing, solely by having heard of the experiences at Maintz. In any case, what is definitely manifested by the documents is this: Castaldi, born, as far as we know, about 1398, was a doctor, and in this capacity went to Capodistria in 1461 where he had been appointed by the local authorities. He was still there in 1464, but went to Venice in 1469. In 1471 he was licensed printer in Milan, where he had obtained letters patent from Galeazzo M. Sforza, but in May of the following year he renounced the privilege, apparently invited to do so by the same Duke, and consented to return to Venice in order to leave all free to practise the art. The Duke granted him exemption from tax on all his apparatus and on "all those books made and wrought in print which are to be found here." The documents discovered and published by Dr. Biscaro in 1915 throw more light on this obscure episode. From these it would seem to be proved that Castaldi

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had printed in Milan, probably with the aid of Zarotto, of whom we shall speak later, the three books which were published in 1471 without the name of the printer ("Festus," "Pomponius Mela," and "L. B. Alberti"), and perhaps also the "Epistole di Cicerone," edited in March 1472 under the name of Filippo di Lavagna, with whom Castaldi was later associated. After Castaldi left Milan very little is known of him. In 1474 he was still in Venice and we know that he must have died after 1479. About thirty-eight years ago a scholar of Capodistria claimed that there existed two rare leaflets, the "Responsorio di S. Antonio di Padova" and the "Orazione alla S. Sindone," printed by Castaldi about 1461 at Capodistria, with the aid of two natives of the place. But these two pamphlets have never been rediscovered, nor have we more reliable evidence as to their existence. If by chance other proofs were forthcoming to verify and support the statement of the Capodistrian scholar, it would be confirmed that Castaldi was not only the first Milanese printer, but also the first Italian printer, and that typography, instead of being brought into Italy about 1464 by two German priests, became known by virtue of a worthy Italian in 1461.

IV. The origin of typography in Italy is not without some little obscurity. Up till now it has been generally accepted, without question, that printing was introduced about 1464 at Subiaco. But without taking into consideration what may result from new researches as to the part played by Castaldi in the first publications in Italy, towards the end of 1926 the well-known bibliographer, Konrad Haebler, announced that he had discovered a fragment of a

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"History of Christ's Passion" in Italian and with woodcuts. It would seem that an unknown German printer, almost certainly a pupil of Gutenberg, who had already printed various editions of the same text in Germany, had come to Italy in 1462 to print this booklet. The locality is not precisely known, but Haebler thinks it to be a little town situated somewhere between the Po and the Arno. This striking announcement requires further confirmation and elucidation. In the meantime it may be said that there is no doubt whatsoever—even according to the opinion now generally held—it was by the Germans that typography was brought to Italy, and that there it spread through the towns, castles, and monasteries: more than 150 German printers are known, the names of whom are recorded by the late Demetrio Marzi in a monograph printed in 1900 in the "Festschrift," which was published for the Gutenberg centenary.

According to the generally accepted tradition, printing was introduced into Italy about 1464 by Conrad of Schweinheim, and Arnold Pannartz, of Prague, who stayed for a time in the Benedictine monastery of Subiaco, near Rome, summoned there, it is supposed, by Cardinal John Torquemada, or de Turrecremata, who from 1455 held the monastery *in commendam*: he was a Spaniard, and must not be confused with his nephew, the famous Inquisitor. They were both priests, the first from the diocese of Mainz (probably from the village of Schwanheim on the Main), the second from the diocese of Cologne; and they were priests of no mean order, since a few years later they asked to be created

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canons, and received from Sixtus IV livings with high prebends.

They first printed a "Donatus," but not even a leaf of this first impression has come down to us. Up to the present day it was believed that after the "Donatus" they set about printing the "Lactantius," but the late Carlo Fumagalli, a bibliographer of Lugano, proved that the undated quarto edition of "Cicero de Oratore libri III ad Q. Fratrem" preceded the "Lactantius," which, nevertheless, can claim to be the first book of certain date printed in Italy. The "Lactantius Firmianus de divinis institutionibus adversus gentes" is a very rare book, printed in fine Roman characters, which were undoubtedly engraved in the monastery by the two printers, who took as their model the codices in the Carolinian minuscule lettering which belonged to that famous library. It is in folio, with thirty-six lines to a page. In this, as in the other books they printed at Subiaco, they do not put their names, but only the date and place of publication.

After printing with the same characters St Augustine's "De Civitate Dei" in 1467, they left the monastery of Subiaco, and at the instance of the two brother nobles, Pietro and Francesco Massimo, they went to Rome, where the fame of their editions had already preceded them, and before the end of the year they published the "Epistolæ familiares" of Cicero dated "In domo Petri de Maximo MCCCCLXVII". This and the other volumes published by them at Rome were in different type from those printed at Subiaco, where, perhaps, the earlier characters had been left. The new letters, although

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inferior to the old, were also beautiful and delicate of form. To these was given the name of the *Roman* character, also called *Venetian* (though the first name persists), after the da Spira brothers, and more particularly Nicholas Jenson, who printed with other types at Venice, which were superior to the former from the æsthetic point of view, and perhaps unsurpassed by any in the world.

In 1467, or perhaps earlier, a competitor, Ulrich Hahn, of Ingolstadt, was established in Rome. Within a short time he published the "*Meditationes Joh. de Turrecremata*," an extremely rare work (of which only four copies are known), illustrated with thirty-two woodcuts (thirty-four in subsequent editions); it is the first illustrated Italian book. These woodcuts reproduce in simple line the frescoes, now destroyed, which are painted, by the order of the Cardinal Torquemada, already mentioned, by an unknown artist (perhaps Antoniazzo Romano) in the first cloister of S.M. supra Minervam in Rome. Ulrich Hahn continued this art until his death in 1478. Meanwhile Schweinheim and Pannartz worked together, apparently with little success, until 1474, when they separated. The latter continued printing in the house of the Massimo; the former, who was perhaps etcher and engraver of the characters, engraved on copper the beautiful geographical charts of "*Ptolemæus*." After his death this work was completed and published by another German, Arnold Bucking, in 1478. By 1500 there were at least thirty-eight printing works in Rome, almost all of which were directed by Germans, of whom we shall name only Stephan Plannck, Eucharius Silber, alias

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Franck, and Johann Besicken, who are the most important.

V. Typography was brought to Venice by Johannes of Spira (or Speyer), who in 1469 published two editions of Cicero's "Epistolæ ad familiares" and the magnificent "Historia naturalis" of Pliny. To him the Doge conceded the first printing privilege which is recorded. Of this curious document, issued by the Venetian Senate, Marin Sanudo speaks thus in the "Vite dei Dogi" (ed. Muratori, RR. II. SS., vol. xxiii, col. 1189): "(MCCCCLXIX): In September it was decreed that, since the art of printing had come to light, the rights of the Letters of Tully and Pliny should be granted to John da Spira for five years, and that others should not print them." John of Spira died a few months later, and was succeeded by his brother, Vindelin, who worked until 1477. In 1470 came Nicholas Jenson, who brought printing to a state of perfection which had never been reached before. He was born at Sommevoire, on the Upper Marne, and in 1458 was apparently sent to Maintz by the French king to get possession of Gutenberg's secret. In 1470 he came to Venice, and printed there in magnificent old Roman characters copied from the finest specimens of humanistic writings. He was created Count Palatine by Pope Sixtus IV., and died in 1482, extremely rich according to Marin Sanudo. One of his publications is the famous "Decor puellarum," perhaps issued in 1471, but with the erroneous date of 1461, a mistake which has caused rivers of ink to flow from the pens of bibliographers and historians of typography. For a long time he was in partnership with John of Cologne. They countersigned their prints with a seal which

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was imitated by other printers, and which is the oldest example of that kind of typographical mark. Besides Jenson should also be mentioned the names of Christopher Valdarfer, who remained in Venice scarcely a year, and who printed there the famous and rare "Decamerone" of 1471; Clement of Padua, the first Italian priest who practised typography, and who, in 1471, printed a "Missal" without anyone instructing him in the art, but divining the secret processes by his own perspicacity. Next should be mentioned Erhard Ratdolt, of Augsburg, to whom we owe the first example of illuminated capitals and pages encircled by marginal decorations. At first Ratdolt was in partnership with two compatriots, Bernhardt Pictor (Maler?), of Augsburg, and Peter Löslein, of Langensien, and, together with them, first printed the famous "Kalendarium" of Regiomontanus, two editions of which exist, one in Latin and the other in Italian, and both dated 1476. This furnishes the earliest known example of a first page which contains the title of the book, and the place and year of its publication; in short, all the elements of the modern title page. We should next remember the two brothers, George and Gregory de Gregoriis, with whom book illustration reached the height of its splendour. Leaving many others unmentioned—for in the fifteenth century Venice had more than 150 printing works—we finally come to Aldus Manutius, who may justly be called prince of typographers the world over.

VI. Aldo Manuzio, the elder (so called to distinguish him from his grandson of the same name) was born at Bassiano in the district of Velletri, near Rome, in 1449 or 1450. For some time he was at Carpi acting

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as tutor in the court of the Pio family, and was allowed to add the name of Pio to his own. In 1489 he went to Venice, where he founded printing works with the primary object of publishing beautiful and correct editions of the Greek and Latin classics. He began to publish as late as 1494, with the "*Opusculum de Herone et Leandro*" of Musæus, and with the "*Galeomyomachia*" of uncertain authorship. From that time until the year of his death in 1515 his press was most active in the publication of Greek and Latin texts and also books in the vulgar tongue, all to be prized for their accuracy and sober elegance, and extremely rare for many reasons. Most rare is the "*Virgilius*" of 1501, with which Aldo inaugurated the series of 8vo editions, *enchiridii forma*, a size already seen in the fifteenth century, though rarely, whereas it is representative of the greater number of the Aldine publications. The following year—1502—he published the "*Terze Rime*" of Dante in the same size. This was the first edition of the "*Divina Commedia*" in small size. In this volume he first put into use his well-known sign, namely, the anchor with the dolphin. Various types of this sign exist; the oldest and most valuable of them is that in which the anchor is lightest and the points sharpest, and which is known as the "*ancora secca*." The editions adorned with this mark belong roughly to the years 1502-40, and are particularly sought after by book-lovers. In these 8vo editions he produced a new character which he called *cancellaresco* (chancery type), and which later was commonly called cursive, italic, or Aldine. It was invented and cast for him by Francesco da Bologna, one of the Griffi family,

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and became very much the fashion in the Cinquecento. This Griffi broke later with Aldo, whom he accused, perhaps unjustly, of profiteering by his, Griffi's, labours. Griffi died on the gallows at Bologna in 1518 for having murdered his son-in-law.

Aldus created also a new Greek character, in which, according to tradition, he imitated the handwriting of his friend Marcus Musurus. It is less beautiful, to be frank, than the italic, and it is difficult to read because of the many abbreviated letters which occur. In the publications of the Greek texts, which Aldus cared for with a special love, he had the help of several learned friends, whom he reunited in the *Neacademia*, or New Academy, which met in his house, and whose statutes were adopted from Carteromachus. The classic Greek tongue was obligatory during the sessions of this academy.

VII. After Venice and Rome, Milan holds an important place in the history of printing. She can support the claim of being the first city of Italy that had a press established by Italians, since it appears that she owes the introduction of printing to Antonio Zarotto, of Parma, whose first book with an authentic date would seem to be the "Festus" of 1471, which has already been mentioned. In the light of recently found documents, he apparently began under the auspices of, and in partnership with, the celebrated Pamfilo Castaldi; but what part Castaldi really played is not yet clear. On the withdrawal of Castaldi, Zarotto, with various Milanese and the humanist, Cola Montano, formed at Milan in 1472 one of the first societies in Italy for the practice of typography of which we have mention: the earliest is that which was formed at

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Terni in Umbria in 1470. After Zarotto came Filippo di Lavagna (of whom, however, it is uncertain whether he was only an editor or also a printer), and whose name figures on the famous "Miraculi dela gloriosa Verzene Maria," with the false date of 1469 instead of 1479; Christopher Valdarfer, of whom we have already heard at Venice; Dionigi Parravicini, who printed in 1476 the first Greek book issued from a printing-press, namely, the "Epitome octo partium orationum" of Constantine Lascaris; Leonard Pachel, first in partnership with Ulrich Scinzenzeler, then alone; William Le Signerre, of Rouen; Alessandro Minuziano, of San Severo, in the Capitanata, who was, chronologically, the first of the great literary editors. He is also to be remembered for having, in 1516, illegally reprinted the first five books of the "Tacitus," the rights of which the Pope had given to Beroaldo. He was therefore excommunicated, and gave occasion for the first recorded process for literary forgery.

VIII. Continuing to take in review the principal cities of Italy which welcomed typography in its first years, the following should be remembered: Naples, where Sixtus Reissinger worked, perhaps until 1470 (but the first books of certain date are the "Lectura Bartholi de Saxoferrato" and "Florianus de S. Petro, Lectura super ix. lib. Digesti," both of which were published in 1471), and Florence where, between November 1471 and October 1472, the goldsmith, Bernardo Cennini, already famous for his work on the doors and the front of the altar of the Baptistry, printed, with the aid of his son Domenico, the rare "Commentario di Servio su Virgilio." Cennini, solely from seeing printed books elsewhere, divined the

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process by which they were composed, and without any other guide than his own genius learnt how to strike out the moulds, cast the type, and print this magnificent folio volume of 236 pages. In this century Florence possessed many printing-presses worthy of note. In September 1477, Nicolò di Lorenzo, of Breslau (known, however, as Nicolò Todesco or Nicolò della Magna), published the "*Monte Santo di Dio*" by Bishop Bettini, which appears to be the oldest book stamped with copper engravings. It now seems that the celebrated "*Ptolemæus*" of Bologna was earlier. This has the erroneous date of 1462, but was printed by Domenico Lapi certainly before July 1477, with geographical charts, the earliest impressions of this kind, engraved by Taddeo Crivelli, a famous miniature artist of Ferrara. Nicolò di Lorenzo also published the famous "*Divina Commedia*" of 1481, with Landino's commentary, and illustrated by Sandro Botticelli. Antonio Miscomini, Bartolomeo di Libri should also be mentioned, who printed the first edition of "*Homer*" in 1488; and Ser Piero Pacini, of Pescia, who held the first place among editors of illustrated books. All his publications were carried out with exquisite taste. At Foligno we have Johann Numeister, of Maintz, of whom tradition likes to think as the pupil and assistant of Gutenberg in the publication of the famous "*Catholicon*." Until 1463 he remained in the little Umbrian city as a copyist, and in 1470 he entered the house of Emiliano Orfini (not Orsini, as is generally written) and under his auspices printed Leonardo Aretino's "*De bello italico*" and later Cicero's "*Epistolæ ad familiares*," undated. In 1472 he published the famous "*Dante*," which is

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considered as the first edition of the Sacred Poem and is certainly earlier than the other two editions which came out in the same year at Iesi and Mantua. At Ferrara, in 1471, a certain Andrew Beaufort or Belfort, of Picardy, printed the "*De variis loquendi figuris*," by Augustine Dati. At Bologna in the same year Baldassarre Azzoguidi, a noble of that city, printed the "*Ovidius*." In 1471, also, there was Antonio Mathias of Antwerp at Genoa ; Peter of Cologne and Johann of Bamberg at Perugia ; at Treviso, Gerardo di Lisa, or de Lys, who may perhaps be identified (though many dispute this) with an adventurer, Gerardus de Campo Leodiensi, who was an innkeeper during his youth, then a captain in the army, and later count palatine. In 1472 the printing-press made its appearance in Padua, Parma, Mantua and Verona ; in 1473 in Cremona, Brescia and Pavia ; in 1474 in Modena, Como, Vicenza, Savona and Turin. But, given the small space at our disposal, it is difficult to follow here step by step the destined progress of this marvellous art in Italy.

IX. We must not, however, omit to speak of one of the most curious and characteristic aspects of the history of typography during this first century, and which has, for that matter, continued, although in less measure, during the successive centuries. That is the nomadic printers (and such were the greater number of the early German typographers who came to Italy) who wandered from one part of the country to another in search of work, of patrons, and of money. It was rarely that the smaller towns offered a printer security of work for long at a time ; on the other hand, the simplicity of the printing-press at that period

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allowed the modest equipments to be carried about with great ease. Now it was a country town which summoned them to print the statutes (as, for instance, Rieti, 1549; Novellara, 1611); now a monastery to print the rules or missals or breviaries or other liturgical books of the Order, or sometimes the works of some brother belonging to the convent itself (Nonantula, 1480; Fontebuona, 1520; Mercogliano, 1642). Occasionally it was a petty prince or noble who wished to open printing works in his territory, to satisfy his vanity and perhaps also to publish his works (Saluzzo, 1479; S. Angelo dei Lombardi, 1664; Alvisopoli, 1810). On a few rare occasions it was some small locality which suddenly sprang into notice as the residence of some court, or which acquired importance through exceptional circumstances, and which in consequence required a printing-press (Mondovi, 1562; Corte, 1758; Portoferraio, 1814). Examples of these wandering printers are numerous. Heinrich of Cologne travelled incessantly (1474-93) to Brescia, Bologna, Mantua, Modena, Siena, Lucca, Nozzano and Urbino, just as in the seventeenth century Ottavio Beltrano, a Calabrian, made pilgrimages from Cosenza to Montefusco, Benevento, Naples, Ancona and Sorrento.

The restlessness of these first printers was further encouraged by a certain spirit of adventure which stirred everyone. There are numerous cases of printers who have followed earlier, and perhaps contemporaneously, the most varied trades, not all honourable. One of the most interesting is that of the notorious Nicolò Zoppino, the son of Aristotile de' Rossi, a native of Ferrara, and from 1508 to 1544 publisher of popular books in Venice. At various times during this period

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he was also at Rome, Milan, Ancona and Perugia ; he was bookseller at Ravenna ; poet and engraver of decorative woodcuts ; from Aretino he was ignominiously expelled as an unfrocked monk and bawd ; and he was known as a charlatan at Milan and Rome. This last accusation at least seems founded since mountebanks and quacks were numerous at Ferrara at that time. It is more doubtful that he was the unfrocked monk and pander of Aretino. Another strange figure was Bartolomeo Zanetti, of Casterzago, near Brescia. He was a printer at Florence with the Giunta in 1514, then in 1516 at Rome. In 1520 he was managing the printing-press of the famous Camaldolian monastery at Fontebuona ; from 1535 on he was at Venice, and about 1545 once more in Florence directing the printing works of that fantastic genius, Anton Francesco Doni. In the last years of his life he was again at Venice as writer and copyist, in which profession he was succeeded by his son Camillo, of whose work nearly a hundred Greek codices remain scattered among the libraries of Milan, Berlin, Paris and Madrid.

X. In the Cinquecento, so brilliant a period in the history of Italian culture, the art of printing was in an extremely flourishing condition at Venice, more so than in any other Italian or ultramontane city. Aldo Manuzio, the elder, of whose life we have already given a summary, was at that time near the height of his activity and fame. After his death in 1515 the press was directed for some years by Andrea Torresani, of Asolà, Aldo's father-in-law, and tutor of his sons, the third of whom, Paolo Manuzio, born in 1513, took over the directorship of the house as late

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as 1535. Paolo Manuzio was a great classical scholar, and perhaps more concerned with his studies than with printing. In 1558 he founded, in collaboration with Senator Federico Badoero, the Accademia Veneziana, or Accademia della Fama, which edited various good editions of the classics. In 1561, summoned by Pius II., he went to Rome where he founded and directed the Tipografia Romana. He died in 1574, and was succeeded by his son Aldo the younger, who was born in 1547. He was a man of exceptional learning and did not occupy himself much with the printing-press, which, even during the last years of his father's life, had been directed by others. Aldo the younger was professor of belles-lettres at Venice, Bologna, Pisa and Rome, and in this last city he directed the Vatican Press during the closing years of his life. He died in 1597, and with him perished the line of the great Aldo.

Rivals of the Aldi were the Giunta, a well-known family of Florentine printers who had a press at Venice managed by Lucantonio; Filippo, a brother, had a second at Florence, and Giacomò, a third at Lyons, while other members of the family were established at Salamanca and Burgos. But while the houses in Florence and Lyons dragged on in poverty, that of Venice prospered immediately, so much so that Tommaso Giunta, the successor of Lucantonio, was able to give each of his two daughters a dowry of 100,000 ducats. Lucantonio was at first only a bookseller, but from the earliest years of the Cinquecento he had a press which thrived until the end of the century. It is, unfortunately, only too true that the numerous counterfeits of the Aldine editions, for

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which Aldo grieved so bitterly, were put through for Lucantonio by the Giunta at Lyons. The Giunta published beautiful illustrated works, and also music, principally liturgical. But for music Ottaviano Petrucci, of Fossombrone, is distinguished above all others. He was the inventor of printing music with metal movable type, for which invention the Signoria granted him a patent in 1498. Petrucci printed at Venice from 1500 to 1509 according to this system, and his work was continued by other methods by many music publishers, also in Venice, which city during the sixteenth century surpassed all others in this branch of publication. Gardane was particularly distinguished. We have, in addition, the Paganini (who published also at Brescia and Toscolano on Lake Garda) and who adopted unusual characters, rather small, but very attractive; Marchio or Melchiorre Sessa and his son, Gio. Battista, to whom belongs the celebrated device of the cat holding a rat in its mouth; Francesco Marcolini, of Forlì, who published at intervals for about a quarter of a century (1535-59). His editions, all somewhat rare, are especially beautiful for the fine italic type. Finally there are the Giolito (the stress is on the penultimate, and not on the first syllable) of Trino, a small town of Monferrato, which was called the little Leipzig of Italy on account of the great number of printers which it gave to Venice and other cities of Italy, and also abroad. The Giolito (whose real surname was de' Ferrari: Giolito would seem to be a nickname) furnish the first example in Italy and abroad of the great commercial editor. On this side they were superior to Aldo, who was above all a scholar. The

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most celebrated of this family was Gabriele, who represents the patron type of editor, since for him worked all the best-known writers of the time. It was he who first had the idea of publishing "Collane," or collections of various authors, in separate volumes, but of a uniform style and connected by a common idea. He put this project into execution with the "Collana degli storici greci e latini," begun in 1536, and received with enthusiasm. The editions published by the Gioliti are famous for the beauty of their type, especially the italic, and for the lovely initial figure wood-engravings which decorate them. These editions are known by the now famous emblem of the Phoenix, with various mottoes: *Semper eadem*, which is the most common; *Vivo morte refecta mea*; *De la mia morte eterna vita io vivo*. Gabriele Giolito died in 1578, but the firm apparently continued until 1606.

An account of the art of printing in Venice during the sixteenth century must not be left without noting that, in this century also, the city of lagoons held the first place in book-illustration; as in the fifteenth century she gave us gems of simple elegance in her illustrated books (and only the illustrated Florentine books from about 1490 to the middle of the sixteenth century can compete with the Venetian for simplicity and charm), so in the following century she provides us with specimens, sometimes unequalled even by an art which has reached its finest maturity. In this century, however, although the love of wood-engraving prevails, we begin to find, especially in the second half of it, copper engravings. For example, there is the rare "Medaglie" of Doni, published by

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the Gioliti in 1550, with engravings by the famous Enea Vico of Parma.

XI. At Florence, besides the Giunta, of whom we have already spoken (Filippo began as editor in 1497, died in 1517, and was succeeded by the firm, Eredi di Filippo Giunta; his son Bernardo published, among other editions, the famous Ventisettana edition of the "Decamerone," 1527), mention should be made of Lorenzo Torrentino, a Fleming, summoned by Duke Cosimo I. in 1546, and who, until 1563, published many editions, all very fine and almost all rare. He also had printing works at Pescia and Mondovì. Next we have Giorgio Marescotti, the successor of Torrentino, and, towards the end of the century, Michelangelo Sermartelli. Among the Roman printers, Antonio Blado, of Asola, in the district of Mantua, was particularly well known. He had a press in Rome from about 1515 to 1567, the year of his death. He used very elegant type. In 1549 he was named "Stampatore Camerale" (printer of the Apostolic Chamber), and this is the first example of a press licensed for the printing of the official documents of either a civil or ecclesiastical authority. His heirs continued to publish until 1593.

XII. The seventeenth century marked in Italy more than elsewhere the decadence of the art of printing. We have ugly types (Salvatore Bongi conjectures that these spread over Italy from a foundry already established in Venice in the second half of the sixteenth century), bad paper, above all extremely bad ink, which accounts for the yellowish spots with which the pages are sprinkled. Stendhal laments with reason that Italy has never known how to make ink. It is true never-

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theless, as that shrewd critic has pointed out, that she knew how to use it. The names of a few good publishers can also be given in this century. For instance, the Pinelli and Ginammi of Venice, and more especially Lorenzo and Nicolò Pezzana, the successors of the Giunti; Cecconcelli at Florence; and at Rome Mascardi and the Stamperia Poliglotta di Propaganda Fide (founded in 1626). In this century there were beautiful books illustrated with etchings, an art born in the first years of the sixteenth century, then almost forgotten, and later revived, chiefly in Florence, in the work of Jacob Callot of Nancy and his Florentine pupil, Stefano della Bella. It was in Italy, above all, that about this time the fashion of frontispieces from copper engravings, of which there are most attractive examples, became general.

XIII. With the eighteenth century typography in Italy revived again, and can boast worthy names, such as Zatta and the Albrizzi in Venice; Giuseppe Comino at Padua; Remondini at Bassano; the Società Palatina at Milan; G. B. Bodoni at Parma; Lelio della Volpe in Bologna; Tartini and Franchi, and Manni at Florence; Pagliarini, Salvioni and De Romanis at Rome: at Naples, Felice Mosca and the Simoniana press. Restriction of space does not allow more particular mention except of the two most famous, Comino and Bodoni. The first directed the printing-press that two Paduans, Giovanni Antonio Volpi and his brother, the abbot Gaetano—both great classical scholars, and Gaetano especially an expert bibliographer—opened in 1717 in their own house and at their own expense. The Cominian editions are hunted for by book-lovers because of their accuracy,

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excellent paper and type which is relatively good as compared with the bad taste of the time. The second, G. B. Bodoni, was born on 16th February 1740, in Saluzzo. He was first a compositor for the Propaganda Fide at Rome, and from 1768 until his death (30th November 1813) was at Parma as director of the Royal Press, and from 1791 on was also owner of an own particular press. The great beauty of the Bodonian editions is obvious even to those who are most indifferent to matters of bibliographical interest. A Bodonian edition, especially one of the most elaborate, in large folio and with broad margins, incontestably represents the highest point of æstheticism that can be reached by typography, a height which may perhaps be equalled but cannot be surpassed. It is enough to mention the finest of the fine, the magnificent 1775 edition of the "Epithalamia" in foreign languages, and decorated with copper engravings by Cagnoni, Volpato, and by various other talented artists; the Greek "Anacreon" of 1784; Tasso's "Aminta," 1789; and the "Gerusalemme Liberata" in three folio volumes, 1791; the Greek "Iliad" of 1808, also in three folio volumes, which some consider as the chief work issued by the Bodoni press; and the 1812 edition of "Fénélon," which Bodoni himself considered as his finest work. Unfortunately the Bodonian editions, notwithstanding their magnificence, have slight literary value, both on account of the little worth of the greater number of works printed by them, and because not unfrequently they leave something to be desired in the way of accuracy. Bodoni, chiefly important as a printer, was also engraver of letters. His "Manuale Tipografico," in the first

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edition of 1788, contained 150 examples of Latin characters, and 28 Greek, all engraved by him, while in the second and posthumous edition, published by his widow in 1818, there are, also engraved by him, 291 alphabets in the following types: Latin, round, cursive, italic, capital, "cancellereschi," and commercial, and also 35 Greek and 48 Oriental alphabets. Bodoni had, first as a pupil and collaborator, then as a rival in letter-engraving, abbot Andrea Amoretti, of S. Pancrazio of Parma, who was an extremely clever engraver.

XIV. For the last century we will confine ourselves to the following names, leaving unmentioned the living, and those who were only editors. At Città di Castello, Scipione Lapi (press established 1872; Lapi died 1903); at Florence, the Galileiana Press, founded about 1830 by Glauco Masi, and directed for many years by Mariano Cellini; Vincenzo Batelli (died 1858); David Passigli (1829-57) (these and other dates refer to the establishment of the press and the publisher's death); Felice Le Monnier (1831-84); Gaspero Barbèra (1854-80); Salvatore Landi (born 1831, died 1911), the founder of the press known as the *Arte della Stampa*; at Imola, Paolo Galeati (born 1830, died 1903), who revived the fine Bodonian tradition; at Leghorn, Francesco Vigo (1854-89); at Milan, the Bernardoni Press, founded at the end of the eighteenth century, and now in other hands; Giovanni Silvestri (1800-55); Nicolò Bettoni (died 1842), who had printing works at Brescia, Padua and Alvisopoli (in the district of Fossalta), at Portogruaro and at Milan; the *Società Tipografica dei Classici Italiani*, which passed into the hands of Francesco

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Fusi; Antonio Fortunato Stella (1810-33); the Casa Sonzogno (estab. 1818); Treves (estab. 1862); at Naples, Gaetano Nobile; at Prato, the Tipografia Aldina of Alberghetti (estab. 1795); at Turin, Giuseppe Pomba (born 1795), who in 1814 founded a publishing firm which is to-day incorporated with the Unione Tipografico-Editrice Torinese; and at Venice, Giuseppe Antonelli (born 1793, died 1861).

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FRANCE

BY CHARLES MORTET ¹

I. THE FIFTEENTH CENTURY

I.—Not until 1470, twenty-three years after the printing of the Astronomical Calendar at Mentz (1447), and five years after the introduction of the typographical art into Italy (Subiaco, 1465), did France possess her first printing-office. According to a tradition which does not extend beyond the middle of the sixteenth century, a medal engraver, Master of the Mint at Paris or Tours, Nicolas Jenson, was sent to Mentz, by order of King Charles VII., to "inquire secretly about the invention of printing by means of punches and characters." But we know neither what was the outcome of that mission, nor for what reasons Jenson, instead of returning to his own country, went to Italy and established himself in Venice, where in the year 1470 he was busy practising the art of typography with that mastery which has won him a well-deserved fame.

In fact, to the initiative of two dignitaries of the Sorbonne College must be ascribed the honour of having introduced printing into France. Towards the end of the year 1469 one of them, Jean Heynlin,

¹ Translated from the French by André Paulian, "Inspecteur de l'enseignement des langues vivantes dans les Écoles de la Ville de Paris."

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late Rector of Paris University, who had been elected prior of the Sorbonne College, with a view to multiplying in a correct form the copies of such books as were used to teach Latin grammar and literature, conceived the idea of inviting from the banks of the Rhine, where he had temporarily resided shortly before, three German typographers, Michel Friburger, Ulric Gering and Martin Krantz. Thanks to the help afforded him by Guillaume Fichet, professor of "belles-lettres" and librarian of the College, Heynlin set up at his own expense these three typographers in his own lodging. From 1470 to 1472 twenty-two volumes were printed by them, not in Gothic type, as had been the case for the first books issued in Mentz, but in rounded or semi-roman type, drawn and cast, either after the model of the round letters of the Italian manuscripts of the fifteenth century, or after that of the rounded characters already used by German printers at Rome as early as 1467. The first in date of these Parisian books was a selection of letters in the most refined Latin style, written by Gasparino Barzizzi, a humanist from Bergamo ("Gasparini Pergamensis epistolarum libri").

In 1473, J. Heynlin and G. Fichet having left Paris, the three printers moved to the Rue St Jacques, where they settled in a house bearing the signboard of the Golden Sun; there, under the protection of noble patrons belonging to the court of Louis XI., they published mostly theological books printed in slightly rounded Gothic type. Then, his two partners having gone back to Germany, Gering continued to practise his art by himself, using a new roman type ("Virgilius," 1478).

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II.—In the near neighbourhood of Gering's Golden Sun other printing-offices had been established as early as 1474. These were almost all conducted by Frenchmen, only a few having German or Flemish managers. They multiplied so quickly that, at the end of the fifteenth century, they numbered sixty-one in Paris. The most celebrated of these workshops were those of Pasquier Bonhomme, who printed the first book in French ("Les Grandes Croniques de France," janvier 1477, n. st.), of Jean Du Pré, Guyot Marchant, Pierre Le Rouge, W. Hopyl, Pierre Le Caron, Pierre Levet, George Wolf, Gilles Couteaux and others. Several printers were at the same time book-dealers and sold, together with their own volumes, books which had been printed in other workshops; amongst them must be mentioned: Antoine Caillaut, Philippe Pigouchet, Jean Tréperel, Fr. Baligault, Thielman Kerver.

III.—Lyons was the second French town in which printing was established. In 1473, a wealthy tradesman of that city, Barthélemy Buyer, sent for Guillaume Leroy, a typographer from Liège, who had probably served his apprenticeship at Venice, and supported him at his own expense. The site of Lyons, a commercial town, at the junction of the natural routes from Southern Germany and Northern Italy, encouraged, from the outset, many foreign printers to go thither. These printers, exceeding two hundred in number, whose names appear in the fifteenth century on the tax-registers of the town, were mostly Germans or Italians, the French only becoming the most numerous in the last years of the century. Among them the following names deserve special

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note : Nicolas Philippe, Martin and Mathias Husz, Jean Siber, Jean Neumeister, Jean Dupré, Jean de Vingle, Topié de Pyrmont, J. Trechsel, J. Fabri, Nicolas Wolf, etc.

IV.—Paris and Lyons were the two centres whence the art of typography spread quickly to the rest of the French territory. The first printers, who owned but a scanty stock of tools, were prone to move from one town to another, either out of the sheer spirit of adventure, or because they were eager to answer the call of wealthy burghers or dignitaries of the Church (bishops, canons, abbots), who granted them subsidies and took them under their protection. What special material they needed was easily carried along, as it did not consist of anything more than punches, matrices, a few devices for the casting of characters, and a few wooden forms ; as regards the type-metal and the printing-press, ink and paper which made up their stock of tools, these were generally obtainable on the spot where the printers took up their new residence. In certain large towns, it is true (at Toulouse, for instance), complaints and protests did not fail to arise from guilds of scribes, illuminators and booksellers, disturbed by these new competitors, who produced in greater number and more cheaply books similar to those which they themselves issued. But the practice of the new art, beyond offering numerous advantages, was so favourably received by the educated public (the clerks, students and burghers) that the ancient guilds were bound to accept the economical change which was being wrought in the art of books, and quite a number of scribes and illuminators became typographers in order to earn

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a living.—The Parisian printers spread chiefly in the West and North-west provinces of France. The principal towns in which they settled were: Angers (1477), Poitiers (1479), Caen (1480), Chartres (1482), Rennes and Tréguier (1485), Abbeville (1486), Rouen (1487), Orléans and Angoulême (1491), Nantes (1493), Tours (1494), Limoges (1496), Périgueux (1498). They also went to Champagne and established themselves at Chablis (1478), Troyes (1483), Châlons (1493), Provins (1496). The typographers at Lyons, especially those of German origin, frequently left that town to move to the South of France: thus some of them settled at Toulouse (1474), Vienne (1478), Albi (1481), Chambéry (1484), Grenoble (1490), Narbonne (1491), Valence (1496), Avignon (1497), Perpignan (1500). Apart from the influence of Paris and Lyons, Burgundy and Franche-Comté received, direct from the banks of the Rhine, their first typographers, the latter having settled at Salins (1485), Besançon (1487), Dôle (1490), Dijon (1491), Cluny (1492), and Mâcon (1494). Thus, at the end of the fifteenth century, forty-two French towns possessed typographical workshops.

V.—The first French printers, like the German and other foreigners, did not, at the outset, claim to accomplish anything beyond producing, by means of a mechanical process which multiplied the copies more quickly and at a lesser cost than had been possible in the past, books exactly similar to those which had until then been copied by hand. So faithfully did they reproduce their models that their first productions were not seldom mistaken for real manuscripts, and were sold as such by the booksellers. Indeed, printing was for a long time considered as a particular

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mode of writing (*escripture en moule, livre escript en impression*).

Generally, therefore, the characters of the French incunabula are more or less skilful reproductions of the handwriting of the manuscripts that were copied by the French calligraphers of the middle of the fifteenth century. The outline of each letter, engraved in relief on the corresponding punch and faithfully reproduced by the cast-metal type, had been traced from a manuscript model, viz., either the large "lettre de forme" of the liturgical books, or the more or less rounded small Gothic letter termed "lettre de somme," particularly in vogue for treatises of theology and jurisprudence, or again the "bastard" or semi-cursive Gothic letters, which were used by the copyists of Northern France, particularly for literary works. The round or "roman" type, which some Parisian and provincial printers employed concurrently with the Gothic letters, was initiated, either directly or through the medium of prints brought over from Italy, from the round writing characteristic of the copyists trained at the school of the Florence humanists. This eagerness to obtain accurate reproduction resulted in each body of type exhibiting, as did the manuscripts, beside the plain letters (capitals and lower-case), other letters bearing signs of abbreviation (ā, m^o, p, q;), as also ligatures formed by "soldering" together two simple letters (ðe, bo, ct, ff, fl), so that the bill-of-fount of each body numbered far more characters than it does at present.

Whilst both parchment and vellum constituted, in the fifteenth century, the staple material on which the French copyists transcribed their manuscripts,

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—paper at that time hardly being used for anything beyond scholarly and administrative texts,—the latter material, on the contrary, which better retained the greasy ink and was less expensive, was very soon selected by the printers, preferably to others, vellum being reserved for richly adorned copies. But, barring this difference, the printed volumes exhibited the same general aspect as manuscripts (pages with long lines or divided into two or three columns, the text encircled within a commentary in smaller type, etc.). The composition of the quires, formed by interleaving whole sheets or half-sheets, was identical. The signs indicating the order of the leaves (signatures, catch-words) and the succession of the sheets (foliotation), instead of being printed with the text, were, after the printing, added by hand in the lower or upper margins of each copy.

The volumes, like most manuscripts, bore no other initial title than a “titre de départ,” appearing as an *incipit* at the top of the first leaf and reproduced, sometimes with a slight change, as an *explicit* at the end of the last leaf. Lastly, each copy turned out by the press and printed in black ink, had, like each manuscript on leaving the copyist’s *scriptorium*, to be perfected by the “rubricator” or “illuminator.” The latter, in the blank spaces reserved by the printer, painted with a brush the large coloured initials, usually indicated for him by a lower-case letter printed in black, known as a director, which either was obliterated by the colours, or remained visible in many copies not illuminated. In the most accurate and rich copies the “illuminator” added marginal “vignettes,” and, sometimes, full-page miniatures.

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VI.—The French incunabula retained this close resemblance with manuscripts only for a few years. No doubt the design of the characters used in the Parisian and provincial printing-offices long remained unchanged, with the intricacies resulting from the use of figurative abbreviations. But as early as 1477, the progress of the typographical technique rendered it possible to print, together with the text of each page, the signatures or catch-words and folio numbers. The latter practice, however, spread less quickly than the former: after 1485 the absence of printed signatures is exceptional, while even by the end of the fifteenth century many French incunabula had not been folioed. Likewise, as early as 1480, it had become customary in Paris to print a full-page title at the beginning of the volume. But, at first, this title, consisting of one or more lines in lower-case of various sizes, gave no information as to the place of publication, the name of the printer or bookseller, or the date. One or other of these indications may appear on the title page of a few incunabula at the end of the fifteenth century; yet mostly we must look for them at the end of the volume (colophon), or again in the printer's devices.

Finally a very simple alteration in their technique freed the printers by degrees from the necessity of having recourse to the illuminator's brush in order to complete the copies turned out by their presses. The change consisted in inserting into the forme, before printing, pieces of wood or metal, engraved in relief. These included large capitals, marginal vignettes and other illustrations which were intended to adorn the volume. Consequently the decoration was

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printed in black, on the white paper, together with the lines of the text. Thus was achieved the blending of typographical printing and xylographic printing,—a method which, though inadequate to reproduce texts, had already, during the fifteenth century, brought forth remarkable work as regards the multiplication of designs.

This innovation, instances of which may be found in German typography at Bamberg (1461), and in Italian typography at Verona (1472), made a belated appearance in France, first at Lyons, in 1473 (Mathieu Huss, “*Mirouer de la Rédemption*”), then at Paris, 1481 (J. Dupré, “*Missale Parisiense*”), 1485 (Guyot Marchant, “*Danse Macabre*”), and 1488 (Pierre Le Rouge, “*La mer des histoires*”). The chief popularizer of wood-engraving, blended with typography in this manner, was Ant. Vérard, formerly a miniaturist, later a printer and a bookseller, who, from 1488 onwards, published at Paris numerous books in French (romances of knight-errantry, chronicles, books of Hours, translations from Latin authors), illustrated with woodcuts akin to the miniatures of the French manuscripts of the fifteenth century, *i.e.* both realistic in their inspiration and simple and expressive in their design. With his name must be coupled that of Simon Vostre, a publisher who, with the help of Philippe Pigouchet, himself a printer and an engraver, specialized from 1488 in illustrated books of Hours, publishing countless editions. The pages of these little volumes, printed in small cursive Gothic type, were framed with delicate metal-engraved borders, in which domestic scenes and fanciful ornaments appeared amid sacred designs. Together with the fine

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volumes published by V  rard, these masterpieces spread, both in France and abroad, the renown of Parisian typography.

Notwithstanding their artistic value, the engravings in black lines, which illustrated these books, failed to please altogether the amateurs who had become used to the bright colours of the illuminators. Hence it was not uncommon for the owner of an illustrated book to ask a miniaturist to colour the engravings which adorned his volume ; the lines of the woodcut in that case only acting as substitutes for the black-ink design which, in miniatures, was the groundwork of the colouring. Thus the copies on vellum, which V  rard printed for the King, princes or noblemen of the Court, were usually adorned with miniatures, the coloured reproduction of which may be found in A. Claudin's " Histoire de l'imprimerie en France au XV. si  cle." But already in Simon Vostre's books of Hours, the engravings, more delicate in treatment than V  rard's, are complete in themselves, and copies with overlaid colours are very scarce.

VII.—Among the engraved designs which adorn the French incunabula, the printer's devices deserve special attention. As the printing-offices multiplied, most of the Parisian and provincial printers realized how necessary it had become that their books should bear a more visible address than that which usually appeared in the colophon of the volumes turned out by their presses. To that end they elected to place at the beginning of the volume on the title page, or on the last page, an engraved mark representing either a general emblem (the arms of a town, province or kingdom), or more frequently, the particular emblem

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of their household or family (the sign of their workshop, a monogram, or the initials of their name), a moral or religious maxim being sometimes added.

The most ancient French printing devices go back to 1485 (Rennes, Bellesculée) and 1486 (Paris, H. Martineau). At the end of the fifteenth century about two hundred of them could be counted, all or part of which have been reproduced in Silvestre, L. Polain and Ph. Renouard's special indexes. Thanks to them, the place of publication and name of the printer became known where, as was often the case, the colophon did not bear these indications. Sometimes the same printer would use successively several devices, each of which corresponded to a different period of his practice,—which enables us to date approximately undated books bearing one of these marks.

VIII.—It would be of interest to have particulars about the stock of tools of the French printers of the fifteenth century and their *modus operandi* for the founding of types and the printing of sheets. But, lacking information, we are reduced to conjecture. The only precise document we possess is a woodcut of the "Grant Danse Macabre" (Lyon, P. Mareschal et B. Chaussard, 1499-1500, n. st.), which represents Death seizing both printers and booksellers. In that illustration we see, on the left, the workshop with the compositor's case, the press and the forms ready to be coated with ink; on the right, the bookseller's shop filled with books. We must wait till the beginning of the sixteenth century to find, in the typographic marks of the printer Josse Badius Ascensius (1507, 1520, 1529), a somewhat less scanty representa-

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tion of a press, and later only to read in an account of Gutenberg, inserted by André Thevet in his "*Vrais portraits et vies des hommes illustres*" (Paris, 1584), a minute and accurate relation of the successive operations necessitated by the printing of a book.

IX.—The gradual improvements discernible in the French impressions of the fifteenth century were not uniformly realized in all towns in which printing-offices had been established. In an interval of about twenty years, from 1470 almost to 1490, French typography went through a period of tentative experiments, the head of each workshop freely creating his typographical work and modifying, according to his personal fancy or to the new examples before his eyes, the practice he had learnt, the technique of which was yet unsettled. Hence the wonderful diversity of aspect of the French incunabula of that first period, some of which retain longer than others the features by which they resembled the manuscripts. Progress, in this matter, was obtained much more rapidly in Paris than in the provincial towns, Lyons excepted.

Towards 1490, several Parisian publishers—Ant. Vérard, Simon Vostre, Geofroy de Marnef, Denis Roce, Jean Petit, Guill. Eustace—began to form regular commercial firms in which they employed many printers; the latter used, either their own tools or a stock of types and engraved woodblocks provided by the publishers and which were available for all hands in common. Thus a certain discipline was evolved in the typographical art; a technique of the craft gradually developed, thanks both to the uniformity of professional training and to the practical rules which the publishers made compulsory in their

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workshops. The previous variety in the types of the private workshops was lessened, and many printers no doubt gave up casting their types, receiving them direct from the publishers in whose employment they were, or perhaps even from such professional founders as then existed, in Paris and in Lyons,—though this is a controversial point.

Following in the steps of the printers, many publishers started placing their own professional devices, either on the books they themselves printed, or on those they obtained from other typographers using their tools. Neither was it uncommon to see only a bookseller's private device even on the books which those typographers printed on his behalf, but with their own tools.

II. THE SIXTEENTH CENTURY

I.—During the first twenty-five or thirty years of the sixteenth century, a large number of the books printed in France still retained that air of resemblance with the manuscripts of the fifteenth century which had been characteristic of the incunabula. Both in Paris and in the provinces most printers and publishers continued to use the Gothic characters, represented either by the “*lettre de forme*” or by the “*bastard*” types, or by a slightly rounded lower-case letter which had been imported from the Venetian workshops and was ‘peculiarly suited to small-sized volumes. The characters bearing abbreviative signs were still in use; in many volumes the text, owing to its excessive compactness, was not clear, and moreover the titles lacked elegance. Lastly, the prints and engraved

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ornaments, which decorated the volumes, still exhibited that realistic inspiration and archaic style characteristic of the illuminated books of the fifteenth century. Such was the aspect of the books printed by different typographers, at the request of Ant. Vérard (until 1513), Simon Vostre (until 1521), J. Petit (until 1530), Galliot du Pré (before 1540), as also of the volumes which, during the same period, issued from the presses of Michel Lenoir (d. 1520), Gilles Hardouyn (d. 1521), Thielman Kerver (d. 1522), François Regnault (d. 1524), and many others.

II.—Towards the end of the fifteenth century, however, an event of great moment had occurred, whose influence was to alter completely the art of French typography. The military expeditions of Charles VIII. and Louis XII. in Italy, resulting in the occupation of the Duchy of Milan, had created close links between the two countries. Many Frenchmen entered into direct connection with the humanists and printers of Northern Italy; the monuments and works of art of classical antiquity were made known to them, as also the Greek and Latin manuscripts which had, of late, been brought to light by the masters of the Italian Renaissance. These Frenchmen thus became acquainted with the progress made in the art of books, notably at Venice, where the learned printer Aldo Manuzio had just grown famous by various innovations: he had created the Greek typography; furthermore, inspired by the cursive writing used in the Papal Court of Chancery, he had introduced into typography the new round, narrow and sloping type now termed *italic*; lastly, he had, ever since 1501, popularized the small 8vo size for

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the edition of literary texts. Owing to the sloping types being used in these small volumes, it became possible to insert in each copy the matter comprising a 4to, and the literati were provided with portable editions at a moderate price.

From the first years of the sixteenth century a few Parisian printers, who were also literati enamoured of classical antiquity, strove to make general in France the use of roman type, which they considered clearer and more legible than the Gothic, and to introduce into French typography the innovations of Aldo Manuzio. These were: Gilles de Gourmont, who, in 1507, printed in Paris the first Greek books; the learned Henri Estienne (1501-20); the philologist Josse Badius Ascensius (1499-1535); Simon de Colines (1520-46), who first used in France the "Aldine" or italic types and popularized 8vo and 12mo for scholarly editions; lastly, Geoffroy Tory, a professor of "belles-lettres" who, after having travelled in Italy, established himself in Paris, first as an engraver (1518), then as a bookseller (1525), and later as a printer (1529-33). Not only were Tory's impressions made under the direct inspiration of the Italian art, but the peculiar book which he composed in 1529, under the title of "*Champfleury*," and in which he studied the geometrical proportions which he advocated for the letters of the roman alphabet, exerted a deep influence in France, and caused the Gothic characters—which from that date fell more and more into disuse—to be almost entirely abandoned.

G. Tory's innovations were completed, during the second quarter of the sixteenth century, by a celebrated scholar, who was one of the most active and

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expert typographers of that age : Robert Estienne, the son of Henri Estienne and son-in-law of Josse Badius. Thoroughly versed in Greek, Latin and Hebrew, and constantly keeping in touch with the most learned humanists of his time (Budé, Lambin, Turnèbe, Erasmus), he printed, from 1525 to 1550, in roman and italic type, a Latin Bible which was severely attacked by the Sorbonne theologists, a "Thesaurus Linguae Latinæ" and numerous 8vo editions of Greek and Latin authors, which were remarkably accurate and so cheap as to render them available to all. With a view to printing the books ordered by Francis I., who had appointed him printer to the King, he caused new characters of exquisite beauty to be engraved, some by Guillaume Lebé (Hebrew characters), others by Claude Garamond (Greek, roman and italic characters, which remind us of those of Aldo Manuzio).

III.—Under the influence of these various printers, French typography was entirely altered during the first half of the sixteenth century. In Paris and Lyons the change may be considered as complete by 1540 ; in the other provincial towns it was accomplished a little later. Printed books had by now got rid of the antiquated forms which were derived from the manuscripts ; they assumed a new aspect, of which the following are the chief characteristics :

(a) Henceforth none but the round (roman and italic) characters were in use, except for the liturgical books where tradition long maintained the black letters. Yet, in 1556, an endeavour was made to revive the latter. A cursive character, which copied the French cursive writing of that epoch, with its

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ligatures and intricate designs, was engraved, at Lyons, by Nic. Granjon, and used in a few workshops. The attempt, however, met with but small success, except as regards elementary books used for teaching the children to read the current writing, such as Erasmus' treatise "*De civilitate morum puerilium*," a French translation of which was published under the title of "*Civilité puérile et honneste*" (Paris, 1560); hence the name of "*Caractère de Civilité*" which this cursive type has retained.—The round characters which prevailed in France ever since the middle of the sixteenth century were those which Garamond had engraved. Italics were employed for the whole text of a book concurrently with roman type: the former were chosen preferably for Latin or French poetical works, the latter for prose writings.

(b) The text of books had become clearer and was set in better order. The abbreviative signs had almost entirely disappeared; the horizontal mark placed above vowels (*ā*) to express the nasal sound (*an*), alone still subsisted for many years. The accents, apostrophes and cedillas, introduced by G. Tory into French typography, were in general use. The breaks, that made the text less compact, became more frequent. The comments, instead of being placed around the text to which they referred, were now printed below it, in smaller type (italics, when the text is in roman, and vice versa). Explanatory notes began to appear, either in the margin or at the bottom of the page. The number of the folio, on the recto of each leaf, was always printed, and sometimes the numbers of the pages were marked on the recto and verso. Lastly, in addition to the signatures,

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catchwords were printed at the end of each quire, sometimes even at the bottom of each verso, rendering easy the detection of such inversions as might have occurred in the order of the quires or leaves.

(c) The custom had become general of putting a full-page title at the head of all volumes, below which appeared the printer's or bookseller's mark, followed, in small type, by the place and date of publication and also the printer's or bookseller's address. The title, which was often very long, was set, either in large lower-case, or in capitals combined with lines in lower-case. An engraved border often surrounded the whole page.

IV.—While French typography thus became modified, a new style more in harmony with the round types was introduced for illustrating books. Already in the Gothic books printed at the beginning of the sixteenth century,—in the “*Heures*,” for instance, that Simon Vostre had published between 1498 and 1520,—borders of an archaic style were frequently to be found alternating with Græco-Roman borders, borrowed from the Italian books of the Renaissance, such as antique colonnades, Greek urns bearing stylistic flowers, mythological scenes, etc. There was a greater reason for this new decorative style to be taken up by the French engravers who illustrated the books published in round characters, such as those of Simon de Colines and Geoffroy Tory, in which the arabesques and foliages of the borders blend so well with the round letters of the text. From the neighbourhood of the year 1530, the taste of the educated public underwent a sudden change. The romances of chivalry, the “*fabliaux*” of the Middle

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Ages, the old French chronicles, ceased to be in vogue, being superseded by Ovid's "*Métamorphoses*," Homer's "*Iliad*," Petrarch's "*Triumphs*," Boccaccio's "*Decameron*," and by Fr. Colonna's "*Hypnerotomachia Poliphili*," that masterpiece of Aldo Manuzio's typography and of Venetian engravings. In illustrating the translations of these works, the French engravers,—among whom must be mentioned Jean Goujon, the two Jean Cousin and Bernard Salomon,—were inspired by the refined art of the Italian printers and architects whom Francis I. had gathered around him in his palace at Fontainebleau.

Instances of this new style, which prevailed in France towards the middle of the sixteenth century, may be found in the illustrated books which were printed, in Paris, by Denys Janot, Estienne Groulleau, Jacques Kerver, Chrétien Wechel, and in Lyons, by Macé Bonhomme, Guillaume Rouillé, and especially Jean de Tournes. The latter's 8vo volumes, decorated from 1546 to 1560 by Bernard Salomon with such delicate taste and skill, are artistic masterpieces.

It was still by means of wood or metal cut in relief that the prints, borders and ornamental initials were obtained. But during the latter half of the century a new process made its appearance in French typography, namely, copper-plate ("*gravure en taille douce*"), which was destined at the beginning of the seventeenth century to supersede the engraving in relief.

V.—During the latter half of the sixteenth century, French books retained the novel appearance described above. Thanks to the learning, taste and technical skill of her printers and engravers, France, in the course of about fifty years, produced quite a number

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of fine books, worthy of competing with the most remarkable productions of Italian typography and engraving. Foremost among the typographers to whom should be ascribed that honour, must be mentioned the printers to the Crown ("imprimeurs du Roi"), i.e., those whom the King—all others excluded—entrusted with the task of publishing either the Government's records, edicts, orders, acts of the High Courts of Justice, or the literary or scientific works which he bade them print at his expense.

These printers were selected among the ablest craftsmen and appointed for a limited period; they received wages as royal officers, and were entitled to place their title on the books they produced. Nor was it extraordinary that they should add to their own marks, others exhibiting the royal arms and the emblems of their office. They performed their work for the King in their own workshops and with their own tools: yet the King sometimes ordered special type-printing punches, which were to serve for his impressions, to be engraved at his expense. As they were his property they were deposited, first at the Royal Library, then, from 1563, at the "Chambre des Comptes," the printers only retaining the matrices, with a view to casting the types they were to use. They could sell these founts to their confrères, provided the latter mentioned on the title of their publications that they had been printed "*typis regiis*."

The appointment of printer to the Crown goes back to Charles VIII., who bestowed that title upon Pierre Le Rouge (1488-91). This custom grew chiefly under Francis I. and his successors, who conferred these functions—whether limited or not to special

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lines of books—on G. Tory (1531), Ol. Mallart (1538), Pierre Atteignant (for musical books, 1538), Conrad Neobar (for Greek books, 1539), Robert Estienne (for Greek, Latin and Hebrew books, 1539-40), Denys Janot (for French books, 1544), Charles Estienne (1551), Robert Ballard (for musical books, 1553), Turnèbe (for Greek books, 1551), Robert II. Estienne (1561), Michel Vascosan (1561), Guillaume de Nyvert (for French books, 1568), Frédéric Morel (1571), Mamert Patisson (1578), Frédéric Morel II. (1581), Jamet Mettayer (1583), and many others. These printers' productions are generally highly commendable because of the beautiful arrangement and accuracy of the texts, the elegance of the ornamental initials, fleurons and headbands, which give an artistic appearance even on their administrative publications.

Side by side with the printers to the Crown, a few other French printers of the sixteenth century deserve mention: André Wechel, who printed in 1572 the "Chirurgie" of Ambroise Paré; Hemri II. Estienne, who, until 1598, continued the typographical work of his father, Robert Estienne, but was still more famous because of his Hellenistic works and writings on the French language; Sébastien Griphe, an excellent humanist, whose editions of Latin authors, printed at Lyons from 1525 to 1556, equal those of the Estiennes as regards the accuracy and clearness of the texts.

Lastly, with the history of French typography may justly be associated the work of the great printer of Antwerp, Christopher Plantin. A native of Touraine, he had learnt typography at Caen, and had afterwards established himself at Antwerp as a bookbinder (1540), and as a printer (1555). During his long career

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applied individually to the royal magistrates (Parliaments and other courts), begging, on ground of equity, to be alone empowered to print and sell a book or a series of specified works. That exclusive licence, which also prohibited any other person from printing or selling the books therein mentioned, was termed a "privilège." Its formula was usually printed at the beginning of the books concerned, and all offenders were answerable to the Royal Court, by which it was issued. The most ancient "privilèges" granted in France are dated: 1498 (for Trechsel and Clein at Lyons), 1507 (for Ant. Vêrard), 1510 (for Jean Petit), 1516 (for Josse Badius), 1526 (for G. Tory); they increased rapidly in number, and as early as the middle of the sixteenth century had become the rule. They were granted only a limited period, varying from two to ten years, which was considered sufficient for an edition to be sold out, and for the printer or bookseller to be compensated for his trouble and expenses.

Having once been called to intervene in the printers' and booksellers' disputes, the Government, which realized the possibilities of typographical art as regards the propagation of ideas contrary to the authority of the Church or State, extended its intervention much further: it began to institute police regulations concerning the printers and booksellers. In 1535, Francis I., at the request of the Paris University and Parliament, and in compliance with the eager desire of the Roman Catholic Church to stem the dissemination of the Lutheran doctrines, forbade all printers to publish any books dealing with religious matters or ecclesiastical discipline before obtaining the imprimatur ("approbation") of the Parisian

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Faculty of Theology. With a view to facilitating this control, the Royal Order of 1537 prohibited all printers and booksellers, under pain of forfeiture and fine, from selling any books before remitting a copy to the warder of the King's library or to his deputies in the chief towns of the realm. At the same time, the acts of the Paris Parliament gradually extended censorship to medical, astrological, legal and literary books, as also to those intended for elementary education. Under Henry II. and his successors a series of edicts, ranging from 1549 to 1561, enforced the most drastic preventive or repressive measures against all printers and booksellers, and enacted that their offices or shops should be periodically inspected by the Royal Commissioners. Lastly, from Charles IX.'s reign,—owing to the ever-increasing number of violent pamphlets and seditious writings issued as a result of the religious wars,—censorship became not only religious, but also political. The Order of 1563, confirmed in 1566, reserved for the Royal Chancellor alone the right of granting an “*approbation*,” Parliament being excluded from that prerogative. Henceforth no “*privi-lège*” could be granted respecting any book, previous to an “*approbation*” having been obtained for it, and conversely, any “*approbation*” conceded by the Chancellor implied “*privilege*” for the printer or bookseller to whom it had been granted. A single formula expressed both the “*approbation*” and the “*privi-lège*,” and was to appear, either at the beginning, or at the end of the volume. But in fact these regulations were very poorly observed during the troubles of the second half of the sixteenth century, and a number of books and pamphlets

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were published, openly or secretly, without any "approbation."

The liberty in force at the beginning of the sixteenth century exposed the printers to a second danger: they were menaced by the quarrels originating in questions of salary, which frequently broke out between the masters and the men, and which might result in strikes. With a view to preventing or quelling these strikes and such acts of violence as the strikers might commit, the master-printers of Paris and Lyons applied to the royal officers and to the King himself, and the Sovereign intervened energetically in their favour (1539, 1541 and 1544). Throughout the troubled period of the Religious Wars, they endeavoured to build up a code of corporate regulations, which were approved of by the Royal edicts (1571, 1586 and 1610); but, however, not definitely organized prior to the Order of 1618, which created in Paris the "*Communauté des imprimeurs, libraires et relieurs.*" The several conditions required to become an apprentice, a companion or a master were fully defined in that Order. The number of the masters was first limited to twenty-four, and in time extended to thirty-six; and as they themselves alone had the right of appointing new masters, these functions speedily became monopolized by a small number of families. At the head of the Community was a Board, consisting of a syndic and four deputy-syndics elected by the masters; its duty was to see to the enforcement of the King's regulations, the proper management of the workshops, the good quality of the presses, types and paper. This corporate regime was later extended to the whole kingdom, and lasted until the Revolution.

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THE SEVENTEENTH AND EIGHTEENTH CENTURIES

Throughout these two hundred years the French-printed books retained in essentials the form they had reached in the middle of the sixteenth century. Typography exhibited but slight alterations in the designs of characters; the illustration of books, on the contrary, showed greater changes, both in the process of engraving and style of decoration.

I.—During the first half of the seventeenth century typographical art underwent some deterioration. Many printers, no longer concerned with the accuracy of the text and the external beauty of their books, merely sought commercial profits; moreover, the profession became filled with a number of ignorant, unskilled artisans. Yet there existed most creditable exceptions, such as, on the one hand, a few printers to the Crown, Ant. Estienne (1613), Claude and Charles Morel (1625 and 1635), Ant. Vitré (1630), Sébastien Cramoisy (1635), and on the other, the various typographers who had assisted in printing those vast and costly publications issued, at joint expense, by the guilds of publishers that had been created in Paris from the close of the sixteenth century, and had multiplied in the seventeenth. The most famous of these was the “Compagnie de la Grand’Nef” (1631), which published a part of the Greek and Latin works of the Fathers of the Church.

But it is chiefly to a State institution that must be ascribed the honour of having maintained sound typographical traditions in France. It has already been stated that, as early as the sixteenth century,

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there existed printers to the Crown, pensioned by the King, and also royal types, the punches of which were engraved at the King's expense, the matrices being kept by the printers to the Crown; yet such a thing as a Royal Printing House was yet unknown, since the printers to the Crown worked in their own premises during the term of their temporary office. It was not until 1640 that Louis XIII., urged by cardinal de Richelieu, decided to set up, in the Louvre, royal typographical workshops, specially entrusted with issuing the publications required by the King's household, and, moreover, "multiplying and popularising the chief monuments of Religion and the 'Belles-Lettres.'" Sébastien Cramoisy, an expert printer to the Crown, was appointed Director of the Printing House, and two learned men, Tanneguy Lefèvre and Trichet du Fresne, were associated with him for supervising the impressions.

The Royal Printing House made use of the following types: (a) the Greek characters ("Greco du Roi"), which Cl. Garamond had himself engraved in the sixteenth century, and which, after having been lost from 1602 to 1634, had been recovered by Ant. Estienne from the hands of the engraver H. Le Bé, junior, and placed, in 1640, in the Louvre Printing House; (b) the roman and italic characters which tradition likewise ascribed to Cl. Garamond; (c) Oriental characters (Arabic, Syriac, Turkish, Persian, . . .) which Ant. Vitre had purchased at Richelieu's bidding, in 1632, from a private printing-office set up in 1615 by Savary de Brèves, the French Ambassador in Constantinople. None but the French printers were entitled to buy the moulds from which these various

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characters were cast. Not only were the finest characters used, but also the greatest care was exercised in selecting the most suitable sorts of paper, and the decoration of the volumes, in which designs and plates were included, was entrusted, the drawing to Nicholas Poussin, and the engraving to the best artists of the age.

The Louvre Printing House,—which was directed after the death of Séb. Cramoisy, first by his grandson, Mabre-Cramoisy, then by a house of Lyonnese printers, the Anissons,—issued at great cost, during the seventeenth and eighteenth centuries, quite a number of fine publications mostly in folio, among which may be mentioned: “*L’Imitation de Jésus-Christ*,” the “*Biblia Sacra*,” an edition of the “*Conciles*,” the works of Virgil and other classics, the “*Corpus Historiæ Byzantinæ*,” the “*Tapisseries du Roi*,” etc.

In 1692, the King decided to renovate the worn-out working stock of the Louvre Printing House by founding characters engraved for himself alone, and which could not be confused with those of any other printer. The engraving of the new punches was made from the geometrical designs of Jaugeon, a member of the “*Académie des Sciences*,” in twenty-one various bodies, first by Philippe Grandjean, chief engraver and letter-founder to the Crown, then, after his death, by his pupils, Jean Alexandre and Louis Luce. The new roman and italic types (“*Romain du Roi*”), which could be used by no other printer, even French, were derived from Garamond’s style, but differed because of the thinning of the up strokes and more regular features of the italic letters: a fine specimen of which is to be found in the “*Médailles*

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sur les principaux évènements du règne de Louis le Grand" (1702).

II.—At the time when the Royal Printing House was created by Richelieu, the French typography, spreading beyond the frontiers of the country, was adopted in the Netherlands by the famous family of Dutch printers, the Elzeviers, who had founded, first in 1620 at Leyden, then in 1640 at Amsterdam, extensive printing-offices and prosperous bookselling establishments. Now the Elzeviers were chiefly connected with France, not only because they printed many French books (such as the works of J. L. Guez de Balzac, P. Corneille, Descartes, etc.), but also because they procured their paper from Angoulême and used types copied from the roman and italic characters employed in France. A pupil of G. Lebé, Jacques de Sanlecque, had engraved very fine types during the first half of the seventeenth century, which were slightly modified copies of those of Garamond. From the pattern of these French characters, a Dutch artist, Christopher Van Dyck, engraved the so-called Elzevier types, in which the face of each letter was narrow, and the down-strokes were thin, differing very little from the up-strokes. The amount of French books printed by the Elzeviers, and above all the great success obtained by the elegance, cheapness and handiness of the very small-sized volumes which made their name famous, rapidly gave to Elzevirian typography a great reputation in France; and during the eighteenth century these new types were adopted by the best French printers, Jombert, Guérin, Coustelier, Barbou, Prault and others, particularly for literary works. Akin also to the Elzevirian types

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were those engraved, at that time, by P. S. Fournier, junior, a talented letter-founder, who in his "*Table des proportions*" . . . (1737) and his "*Manuel typographique*" (1762-64) explained in a striking manner the theory of his art. He was the first to indicate by numbers the various sizes of letters, by inventing the typographical "*point*," later adopted and improved by Fr. Ambr. Didot.

III.—The illustration of French-printed books, in the seventeenth and eighteenth centuries, presented one characteristic feature: it no longer was obtained by engraving in relief on wood or metal, as had been the practice during the sixteenth century, but was produced by means of copper-plates, cut with the burin or bitten in with aqua fortis. This process had been successfully practised, as early as the sixteenth century, by prominent Italian, German and Dutch artists. It offered advantages which engraving in relief, on wood, or even metal, did not possess. The engraver who handled the burin or etching-needle with skill performed his work more swiftly and with greater finesse; by combining dots, strokes and hatchings he obtained more delicately shaded half-tints. But in the decoration of books, where copper-plate designs or ornamentations were to be combined with the printed text, technical difficulties arose. For the production of a printed text it was sufficient to place the sheet of paper merely in contact with the inked characters; but to obtain copper-plate prints the sheet had to be firmly pressed against the plate until it had, so to speak, pumped up the ink which lay in the cuts. Hence it became necessary to adopt one of the two following courses: either to

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make a full-page impression from the copper-plate prints intended to adorn the volume (a method employed for author's portraits, plans of towns and architectural plates), or, whenever the prints were to be inserted in the text itself, to proceed to two different impressions, the former for the text, the latter for the engraving,—which involved a meticulous use of guiding-marks.

Notwithstanding this intricacy, several Parisian and Lyonnese publishers started, about 1560, to adorn their books with copper-plate prints produced by artists such as Etienne Delaune, Pierre Woëriot, Théodore de Bry, Léonard Gaultier. Yet the practice was exceptional; and not until the end of the century, when the illustrated books turned out by Plantin's presses were common in France, did this process become general. This printer had begun, indeed ever since 1569, to make use of copper-plate for the frontispieces and large engravings in full-page which adorned his "*Biblia Sacra*" and the other fine volumes which he subsequently published. These prints—the work of Flemish artists—generally dealing with serious subjects, were of conscientious but often ponderous accuracy. Their style was frequently copied in France during the first half of the seventeenth century, notably by Leonard Gaultier and Thomas de Len. Henceforth, throughout a period of two centuries, engraving in relief on wood was abandoned for full-page plates, vignettes in the text, borders and frontispieces; it remained in use only for fleurons, ornamental initials and other minor typographical embellishments, which could thus be inserted in the printed text and struck off together with it.

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From 1630, following the example set by Jacques Callot, who had substituted aqua fortis for the burin to obtain his copper-plates, and thus given to his etchings a lighter and softer tone, his pupils, Michel Lasne, Abraham Bosse, Nic. Cochin, introduced a new, more original and more lively style in the books they illustrated. Soon, however, under Nicolas Poussin's influence, engraving sought its inspiration in the masterpieces of antiquity or in the copies of them made in Italy, and assumed a dignified stately tone in keeping with the even majestic style which prevailed in the artistic and literary works of the reign of Louis XIV. The volumes, mostly in folio, which were illustrated with the burin by Cl. Mellan, Jean Lepautre, François Chauveau, Rob. Nanteuil, Gér. Edelinck, are remarkable for their delicately wrought portraits of the authors, their frontispieces laden with allegory, and their large plates representing chiefly religious scenes. An accessory system of decoration was added to these, consisting of headbands placed at the beginning of the chapters, tail-pieces and large initials ("lettres grises") ornamented with flowers, animals and small human figures, always in the Græco-Roman style.

IV.—Towards the end of the century the books illustrated by Sébastien Leclerc, who had learnt his art from Callot and Abr. Bosse, and by his pupil, Bernard Picart, exhibited signs heralding the advent of a lighter and more graceful, though sometimes more frivolous, form of art. From the Regency to the end of the "Ancien Régime," the style of the engravings (which are almost always aqua fortis touched up with the burin) assumed a free and refined elegance

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of treatment, which revealed the predominant influence of Watteau and Fr. Boucher. Not only in the valuable, but even in the most mediocre literary productions, the illustrations increased so profusely in number as to become the essential part, the text being but an accessory. Characteristic of this period was the abundance of "vignettes," namely of small engravings which are found surrounding the titles, adorning the heads of pages or the ends of chapters, or inserted in the text, where they were often framed with an elegant cartouche.

At this period too, in most small sizes (12mos and 18mos) which were more and more popular, recourse was frequently had to the engraved titles which the Elzeviers had rendered fashionable during the preceding century. Instead of the different lines forming the title of a book being set in types, they were engraved on the copper-plate prepared for printing the frontispiece, so that the whole page could be struck off at one "pull" of the press.

With this illustrating work must be associated the names, not only of professional engravers, the most famous of whom were Cl. Gillet, Gravelot, Ch. Eisen, Moreau le Jeune, Choffard, Marillier, but also those of painters and draughtsmen such as Oudry, Fr. Boucher, Fragonard, Gabriel de Saint-Aubin, Ch. Nicolas Cochin. To the perfection of their decorative work must be ascribed the fame of the French books of the eighteenth century, which typography alone, frequently neglected in the works of many printers, would have been unable to win for them. Among the fine volumes illustrated by these artists, it is sufficient to mention: the "*Œuvres de Molière*"

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(Boucher, 1734), the "Fables de La Fontaine" (Oudry, 1755), the "Décameron de Boccace" (Gravelot, Boucher et Eisen, 1757), the "Contes de La Fontaine" (Eisen et Choffard, 1762), the "Métamorphoses d'Ovide" (Eisen et Choffard, 1767), the "Baisers de Dorat" (Eisen et Marillier, 1770), the "Chansons de Laborde" (Moreau le jeune, 1773), the "Œuvres de J.-J. Rousseau" (Moreau le jeune, 1774-83).

V. If, apart from the Royal Printing House and a few exceptionally talented printers, French typography did not, in the seventeenth and eighteenth centuries, reach the standard it had attained in the sixteenth, the chief cause must be sought in the obstacles set up by the corporate system and the royal censorship. The Orders of 1684 and 1723 had completed and extended to the whole kingdom the regulations first instituted solely for Paris by the Order of 1618. These regulations were intended for the benefit of a few masters, who held the companions and apprentices under strict dependence and ran hardly any risk of competition among themselves; they crippled individual initiative and thus stemmed any progress of typographical art, which practically remained at a standstill until the end of the "Ancien Régime." They even failed to prevent conflicts frequently arising within the Community itself, between printers, booksellers and bookbinders, who sought to overstep the limits of their profession to encroach upon those of their confrères. A schism was pronounced by the Edict of 1686: the printers and booksellers alone remained in the ancient Community; the bookbinders were excluded and joined the gilders to form a separate Community. But the quarrels and law-suits

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between printers and booksellers continued to grow, still more intricate because of the conflicts with the engravers, who had wrongfully assumed the right of printing lengthy texts in collections of etchings which they engraved.

As regards royal censorship, the strict provisions of the Royal Orders of the sixteenth century survived during the seventeenth, though, in fact, they fell into disuse for purely literary works, being only enforced for religious, philosophic, scientific and political books. The power of appointing the persons upon whom devolved the care of examining the books was conceded, in 1624, to four Royal Censors, who were alone entitled, under the Chancellor's authority, to grant or refuse the "approbation"; and the granting of that approbation, together with the "privilège" attaching to it, was subject to a deposit of no longer only one, but of two (1617), and later three copies (1658) in the King's library, two extra copies being reserved for the Chancellor and Censor, and three more for the Community of the printers and booksellers of the town in which the book had been printed.

After Louis XIV.'s death, at a time when revolutionary ideas, under the most varied forms, penetrated all religious, political and social matters, the Royal Power considered it necessary to submit the printers and booksellers to more severe supervision. Censorship was extended to all books indiscriminately: none were exempt, except reprints of ancient classical texts, tracts, judicial pamphlets and newspapers, for which the signature of the Lieutenant of the Police was sufficient authority. Consequently the Censors gradually became more numerous, finally reaching

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the number of 178 in 1789. A Director General of Bookselling, who assisted the Chancellor, was appointed as head of the department. Non-observance of the Censor's prohibitions entailed severe penalties: confiscation, fines, imprisonment and even the galleys. But this legislation, apparently most drastic, was alleviated, in fact, by many means of circumvention, which the Chancellor himself was bound to recognize. Unable to obtain the Censor's approval on behalf of their boldest productions, Voltaire, Montesquieu, Diderot, the Encyclopedists and many other men of letters of the eighteenth century, got their writings printed abroad, in England, Holland and Switzerland, whence the books were smuggled into France and sold privately. This practice naturally caused great loss to the French printers and booksellers. Therefore, with a view to enabling these books to be secretly printed in France, the Chancellor would connive at the absence of official leave for such books as bore on their title the name of a foreign town as fictitious publishing place. That is why so many books of this period are found, which, though having been in reality printed in Paris or some other French town, bear the name of Amsterdam, the Hague, London or Geneva, as their typographical address. The same works might even be both printed and sold openly in France, without the Chancellor's official approbation whenever the author or publisher had obtained "tacit permission," namely, secret leave from the Lieutenant of the Police, the effect of which being to stop legal proceedings in the event of the author or publisher being prosecuted, and to free them from the charge.

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NINETEENTH CENTURY

The close of the eighteenth century opens a new era in the history of French printing, and one in which not only the technique of typography, the processes of illustration and the machinery, but also the legal status of the printers underwent important changes.

I.—In typography one name, that of Didot, stands foremost among those of French printers in that age. Of that family of learned technical men, whose fame may compare with that of the Aldes and Elzeviers, the chief representatives were: François-Ambroise Didot, who was a bookseller and printer in Paris, from 1753 to 1804, and his two sons, Pierre Didot, a printer, from 1789 to 1850, and Firmin Didot, chiefly an engraver and type-founder, 1784-1836. François Ambroise created new roman and italic types, which he had engraved and cast under his own supervision, with the assistance of his son Firmin. These types were distinguishable both from the Elzevier characters and those of the Royal Printing-House, by the fact that in each capital or lower-case letter, the hair-lines were made thinner and the main-strokes thicker, so that the contrast between the former and the latter was much more marked than hitherto. Further, the face of each letter, while keeping the same height, was somewhat broader, and consequently more legible. This typographical change, which had already begun to appear in France, in Phil. Grandjean's characters, was also skilfully carried out abroad during the second half of the eighteenth century by two prominent

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printers, Baskerville, at Birmingham (1756-75), and Bodoni, at Parma (1768-1812).

In cutting these new types, Fr.-Ambroise Didot was the first to make use of the typographical "point" as a unit of measure. That unit had already been, as early as 1737, proposed by the punch-cutter, Fournier le jeune. Improving on his invention, Fr.-Ambroise Didot fixed the "point" at $\frac{1}{8}$ th of a line, i.e., $\frac{1}{16}$ th of a millimetre, each body of types having a uniform number of points in height and width. From that time the ancient names of historic origin (Gaillarde, Petit-Romain, Cicero, St Augustin, etc.) fell into disuse, and each body was designated according to the number of points in height (body 7, 8, 9, 10, etc.).

Pierre Didot used the characters which his father and brother had created to print those admirable editions, chiefly folio, of Latin and French classics, the most celebrated of which is his "*Racine*," to which the place of honour was given at the first Exhibition of masterpieces of French industry held in 1801. Firmin Didot's typographical impressions won him as much fame as his attainments as an engraver; we are indebted to him for having first used "stereotype" in bookprinting—a process which had been previously tried by the Scottish goldsmith W. Ged and by the French printers Hoffman and Carey, and which, under the name of "polytypage," had served during the Convention for striking off the Assignats. Its method was as follows: a sunken stamp of one or several pages set up in movable characters was first obtained; then into that matrix was cast the molten type-metal, which, once it had cooled, formed a metallic plate, showing in relief a printing surface identical with that

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of the pages set in type. From this plate all subsequent impressions were struck off; thus both the inconvenience of keeping unused characters long in the forms, and the expense of resetting up type, were avoided. F. Didot availed himself of this process for his impressions, mostly 18mos, of many books in current use, in which the text could be reprinted without any alterations being necessary (classics, calculating tables, liturgical volumes), and which were sold at a very low price.

Many typographers (Mame, Delalain, Crapelet, Danel, etc.), who had been trained by the Didots, adopted their characters which, during the first half of the nineteenth century, were almost exclusively used in France and even spread abroad. Towards the middle of the century, a few type-founders, such as Beaudoire and Deberny, reverted to the characters of the sixteenth and seventeenth centuries, and the roman and italic types which they engraved after the model of those of Garamond, Le Bé, and J. de Sanlecque, received the generic name of Elzeviers' types; of these, specimens may be found in the publications of Jouaust et Lemerre. Finally, new types have been created of late, in which the greater thickness and strength of the hair-lines reduces the wear and tear of the founts, or where the increased number and diversity of shape of the curved lines varies the æsthetic appearance of the printed text, such as the Grasset and Auriol types. They are employed chiefly for valuable volumes or fancy works, but have not, as yet, been introduced into current editions: for these the printers retain either the Didot or the Elzevier types, more or less altered

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according to the special methods of the various type-foundries.

II.—As regards the illustration of French books, the changes achieved during the nineteenth century are still greater. Similar to the methods already in use (engraving in relief and copper-plate) new processes arose, due to the marvellous development of applied arts during that century (lithography, zincography, phototype, photogravure, etc.).

(1) Copper-plates long remained in vogue, chiefly for full-page prints ; until about 1860 they were cut with the burin ; after that date aqua fortis was preferably employed.

(2) Woodcuts in relief, which ever since the close of the sixteenth century had played only a secondary part in book-printing, came into vogue about 1820 ; Raffet, Devéria, J. Gigoux, Tony Johannot, Gavarni and Granville illustrated most of the books and newspapers of the romantic period by this means ; thus too, at a later period, were reproduced the admirable designs, by which Gustave Doré (1850-79) and Daniel Vierge (1875-82) interpreted the great literary works of Dante, Cervantes, Rabelais and Victor Hugo.

(3) As for lithography, which was imported from Bavaria into France in 1816, its use for the illustration of books remained uncommon ; but chromo-lithography, dating from 1837, enjoyed more success, notably for colour decoration in books of art, natural science, travel or history.

(4) Zincography, devised by Gillot in 1850, has, ever since, often been substituted for woodcuts in illustrated publications ; because the metal plates, engraved in relief by means of nitric acid, could, as

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was the case with woodcuts, be linked together with the text set in type, for the purpose of printing ; and the process had the twofold advantage of easier execution and lower cost.

(5) Lastly, about 1876 arose photogravure, photo-type and similigravure. In these the designer's labour previously required for engraving, whether sunk or in relief, was replaced by the direct photography of the objects or scenes intended to be reproduced ; the illustrated books thus assumed a novel aspect : the strokes and hatchings were superseded by shaded tints ; the lines of the objects and faces were thus softened and the pictures grew more realistic.

This brief survey shows what infinite variety is to be found in the illustrated books of the nineteenth century ; and also in what manner the diversity of the new methods, several of which were quite moderate in price, caused illustrations to find their way, not only into "éditions de luxe," but also into current publications, scientific works, school books, commercial catalogues, newspapers and reviews. The work of the printer and that of the illustrator became more and more intimately associated in the productions of French printing.

III.—The most complete change which has taken place in typographical art during the nineteenth century is that of the printing press, which, thanks to the development of machinery, has become wonderfully improved. Without entering into technical explanations, the dates of the introduction into France of the most noteworthy of these improvements may be recalled.

At the end of the eighteenth century, the printing presses, both in France and elsewhere, were still

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scarcely different from what they had been in the sixteenth century. In 1818, Pierre Didot began to use, instead of the wooden press, the Stanhope device invented in London in 1807. This press was entirely built in cast and wrought iron, and might easily be worked by hand, owing to an improved lever. Towards the same date the balls, by means of which the oily ink was distributed upon the types, were replaced by elastic rollers which had been invented by Dr Gannal,—an innovation largely responsible for the progress later accomplished in the making of presses. In 1822, the first mechanical steam press was imported from England, invented in 1790 by the physicist Nicholson, and had the advantage of increasing the speed of impressions and of reducing the most toilsome parts of manual labour. This press could print the sheets on one side only, as indicated by its name “*machine en blanc*”; it was very soon improved, with a view to allowing the printing on both sides simultaneously (“*machine à retiration, presse à réaction*,” 1838). Then, with a view to obtaining a rapid production of newspapers, the French engineer Marinoni invented, in 1866, the first rotary presses. The characteristic feature of these new machines lies in the fact that each complete sheet of type, after having been stereotyped, was bent round a metal drum, so as to fit exactly; that this bent sheet, by rotating against other drums, became inked, and imprinted itself an infinite number of times on the paper which was unrolled in a continuous band; thus, 40,000 copies, cut, counted and folded, could be produced in an hour's time.

These intricate and very costly machines were

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suitable for none but large printing-offices. In 1871, when, as will be shown later, the printer's profession became free, and the small typographical workshops consequently multiplied, the pedal-press, first contrived in the United States about 1860, was imported into France ; its price was moderate, it required but little room, and moreover it could be worked by a single man ; it therefore rendered great services, especially to those small printing-offices specializing in work for private individuals and tradesmen.

But machinery in the typographical industry went further : at the end of the last century it permeated " composition " itself. The type-setters now in use, in France, belong to two distinct systems : in those of the first group,—the earliest working models of which go back to 1885 (trademark Lagerman),—composition is obtained by means of the usual movable printing types which fall into place and are set up, line after line, by a key-board operated by hand ; in those of the second group, which yield a greater output but are more expensive, new types used only once are automatically cast for each new composition. In the latter, casting is effected in two different ways : either by means of stereotyped lines, in which all the words form a single block (Linotype, 1886), or by means of single types. In this case a most ingenious process is employed ; a typewriter, on a roll of paper, prints the composition in perforated characters, and to the typewriter is coupled a type-founding machine, which follows the holes of the paper and casts successively each of the characters which it afterwards sets in print (Monotype, invented about 1898 ; Electrotype, 1902).

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IV.—Since the end of the “Ancien Régime” the legal status of the French printers has passed through many different phases. During the Revolution, a system of entire liberty superseded the regulations of the monarchy. By suppressing the ancient guilds of craftsmen, the Constituante caused the Community of printers and booksellers to disappear. Censorship was abolished, and the Constitution of 1791 proclaimed that “every citizen might speak, write and print, as he chose, provided he should be held responsible, in such cases as were determined by law, for any wrongful use of that liberty.” By creating copyright, the law of July 1793 put a stop to the existing “*privilèges*”: henceforth none but the authors themselves were entitled to reproduce their works and to take legal proceedings against counterfeit. Under a similar regime new printing-offices sprang up on all sides, and also newspapers and pamphlets,—those political weapons which serve to defend the various political parties and which, under the Convention, often drew down upon their authors the fiercest outrages from their opponents.

Under the First Empire the old monarchical regulations were reinstated and made still more drastic. The decree of 1810 limited the number of printers (they were reduced to sixty in Paris), and bound them to the threefold obligation: (*a*) of obtaining a licence from the Director of Printing and Bookselling at the Ministère de l'Intérieur; (*b*) of taking an oath of allegiance to the Emperor; and (*c*) of submitting to the “Ministère de l'Intérieur” five copies of each of their publications, for examination by the Censors. The Director had an arbitrary power of ordering such

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alterations or suppressions as he thought fit in books and newspapers, of confiscating presses or prohibiting the sale of publications and of withdrawing licences.

The greater part of this legislation remained in force during the Restoration. Under Louis Philippe's reign censorship was abolished (1835), except as regards plays, designs, engravings and medals; but the printers' licences were maintained, and they lasted until the end of the Second Empire. They disappeared only at the advent of the Republic in 1870, a mere statement deposited with the "*Ministère de l'Intérieur*" being then substituted in their place. Even this formal requirement was ultimately cancelled by the Press Act of 1881. Nowadays the printers' and publishers' profession is absolutely free. The sole duties which a printer is bound to perform are: (*a*) to keep his accounts in order and pay for his licence, like all other tradesmen; (*b*) to put his name and address on all his publications; (*c*) to leave the required number of copies of each of his works, when finished, with the officials concerned (*Dépôt légal*), none but such minor printing as is ordered by private individuals and tradesmen, financial securities and ballot-papers, being free from this obligation. The law of 1881 enacted that two (and sometimes three) copies should be deposited as aforesaid; this has been reduced to one by the law of May 19th, 1925, which, moreover, enacted that the second copy should be deposited by the publisher, or, in certain cases, the author.

The professional liberty which the printers now enjoy has been synchronous with the growth of machinery in the typographical industry. The combination of these two factors has resulted in an im-

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mense multiplication of printing offices: some of these are large firms equipped with valuable plant, in which the work is divided among a number of specialized workmen; the others are medium-sized or small concerns, which often labour under many difficulties owing to competition among themselves. The industry of books has thus reached a very high standard, as is revealed by the number, variety and artistic value of the French publications which have figured in the national and international exhibitions held during the last few years.

With a view to upholding under such a regime of liberty the good renown which French printing enjoys, and moreover in order to set typographical apprenticeship on a level with modern progress, praiseworthy efforts have been made by the State, the large towns and the Trades' Committees (notably the "Union des Maitres Imprimeurs de France"); thus schools for the study of the art of books have been established (in Paris, the Estienne Municipal School, 1889); Museums of the graphic art have been founded (at Bordeaux, Lyons, etc.); higher technical education has been developed in the numerous institutions organized, first by the Ministry of Commerce and Industry, later by the Ministry of Public Instruction.

Amid the vicissitudes to which the legal status of the French printers was successively submitted, the State Printing House, founded by Richelieu, has lasted until the present day, without any notable alterations. It was successively called National, Imperial or Royal, according to the political regime in force at the time, and has now once more resumed the name of National. Having at its head a Director

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who is under the Ministry of Justice, it is always entrusted with the exclusive privilege of executing, at the expense of the State, all printing needed by the various departments of the different Ministries, or required by the central administrations which have their seat in Paris. Furthermore, a certain sum, specified in the budget, is allowed every year for printing works of science or learned books which, like the "*Corpus inscriptionum semiticarum*," necessitate the use of Oriental characters of which that printing house possesses such a rich collection. In 1811 it renewed its stock of roman and italic types, by adopting the characters engraved in France by Firmin Didot; these it still uses, and only has recourse in exceptional cases to the old characters, the punches of which it still preserves.

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HOLLAND AND BELGIUM

BY MAURITZ SABBE

THE Netherlands play an important part in the early history of printing.

These countries are in possession of remarkable documents from the early days of block printing. There are several separate Flemish prints representing the Holy Virgin surrounded by the Dutch text, and dating from the end of the fourteenth or the beginning of the fifteenth century. Books also, printed by means of wooden blocks, such as the "Biblia pauperum" and the "Speculum humanæ Salvationis," reveal in the style of their engraving and in the shape of the letters an undeniable Dutch origin. A remarkable example of Dutch block printing, a Latin school grammar, of Ælius Donatus, is preserved in the Atheneum Library of Deventer.

As soon as we enter the new stadium of the art of printing, and movable type replaces so advantageously the wooden blocks with their rigid and unchangeable text, the Netherlands begin to play a still more important part.

The question as to whether the honour of inventing movable type belongs to Haarlem or Mainz has been the cause of much discussion. We can only briefly summarise here the arguments *pro* and *contra*.

Between 1560 and 1580 was spread in Holland the tradition that about 1440, Laurens Jansz. Coster of

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Haarlem had found a way of casting letters by means of which he printed the "Speculum humanæ Salvationis" and "Donatus's."

This tradition was first recorded by Hadrianus Junius (Adriaan de Jonghe) in his work "Batavia," published in Leiden after his death in 1588. This story, as a historical document, is weak in two points: first, because it was written 130 years after the discovery in question, and, secondly, because Junius might have been led by love for his native town to claim this honour for his birthplace.

According to others, the art of printing was invented by Jan Gutenberg of Mainz, but here also contemporary documents are lacking. One of the most important documents in support of the Gutenberg claim is a fragment from the "Cronica von der hilliger Stat von Coellen," written in 1499. It is striking that this extract states that the actual discovery of the art of printing was made in Holland and that Gutenberg had only improved on the Dutch invention. This passage of "The Cologne Chronicle" runs as follows: "Although, as already stated, the art exists in Mainz, in the manner now generally practised, yet the first example was found in Holland in the 'Donatuses' which were printed there before that time. There and at that time the above-mentioned art is assumed to have originated, but in Mainz it was more highly developed and refined than in Holland."

The "Donatuses," which gave the example to Gutenberg, were naturally printed with movable type and not with blocks. Gutenberg had no need to go to Holland to learn block-printing, as enough was already known in Germany. Ulrich Zell, the author

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of "The Cologne Chronicle," being himself a printer, will have considered the difference between a block-book and a printing with movable letters.

The question arises as to the existence of books which were printed in Holland with movable type, before Gutenberg. Some believe that they have found them in a number of Dutch Donatuses and school prayer-books, such as the "Abecedarium," which were certainly printed with loose letters, but in a very imperfect way: the letters were not placed in straight lines and the printing of all letters was not equally black. Those little books, however, are not dated, and we cannot with certainty establish their date.

Nevertheless they were very probably printed about 1440. According to the Reverend Father B. Kruitwagen and G. Zelder, the imperfection of the printing of those books is the result of the primitive method of casting the letters. For that purpose moulds of sand or of lead were used and it was difficult or impossible to make them accurate.

The great merit of Gutenberg's work thus really lies in the improvement introduced in the technique of casting by the use of metal moulds made by means of metal dies.

Be that as it may, it was in Mainz that the practical application of printing with movable letters was definitely established, and it was from there that the new art spread through Germany, gradually through Western Europe, and also found its way to the Netherlands. If it originated in Haarlem about 1440, it fell into disuse and only about 1470 did it return to the Netherlands by way of Utrecht.

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During the fifteenth century printing was carried on in the Northern Netherlands in fifteen different places :

Utrecht	.	.	1470, 4 workshops,	51 books.
Delft	.	.	1477, 5 „	29 „
Gouda	.	.	„ 5 „	97 „
Deventer	.	.	„ 2 „	586 „
St Maartensdijk	.	.	1478, 1 workshop,	1 book
Nymegen	.	.	1479, 1 „	5 books
Zwolle	.	.	„ 4 workshops,	118 „
Hasselt in Over-				
Yssel	.	.	1480, 1 workshop,	9 „
Kuilenburg	.	.	1483, 1 „	5 „
Leiden	.	.	„ 4 workshops,	34 „
Haarlem	.	.	„ 2 „	20 „
Leeuwarden	.	.	„ 2 „	20 „
'sHertogenbosch	.	.	1484, 1 workshop,	10 „
Schoonhoven	.	.	1495.	
Schiedam	.	.	1498.	

The most interesting centres were Deventer and Zwolle. Owing to their favourable situation on the Yssel, these towns could export to Cologne and other German places.

Thanks to the renowned schools and monasteries of the *Clerici vitæ Communis*, and also to Gerardus Magnus, of whom Zwolle as well as Deventer and its surroundings could be proud, both towns had also a considerable local *clientèle*.

The production of the printing-offices of North Netherland is small compared with that of other lands. They printed especially for the daily use of students, jurists and theologians.

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To the principal printing works of the fifteenth century belong the Bible of Delft (1477), the "Sonderen troest" by J. de Theramo (1484), the "Boeck van den proprietegten der dinghen" by Barth. de Glanvilla (1485), the "Boeck van den pelgherym" by G. de Guilleville (1486), published by J. Bellaert of Haarlem; the "Vita Lydwinae de Schiedam" (1498), the "Chevalier délibéré" (1500), without name of printer at Schiedam; the "Dialogus creaturarum" (1481), and the "Passionæl" or "Golden Legend," by J. de Voragine, published by G. Leeu of Gouda in 1478.

The names of the printers who worked in the fifteenth century in the Netherlands, both in the North and in the South, are mentioned with a description of their publications, by J. W. Holtrop: "Monuments typographiques des Pays-Bas au 15^e siècle" (The Hague, M. Nyhoff, 1868), and by M. F. A. G. Campbell: "Annales de la Typographie Néerlandaise au 15^e siècle" (The Hague, M. Nyhoff, 1874). In Utrecht there were working N. Ketelaer (1473), G. de Leempt (1473), and W. Hees (1475); in Delft Jacob Jacobsz van der Meer (1477), Mauritius Yemantszoon of Middelborch (1477), Christian Snellaert (1495); in Gouda G. van Ghemen (1486), God. van Os (1468), and the Collaciebrœders (1476); in Deventer Jacob de Breda (1483); in St Maartensdijk Pieter Werrecoren (1478); in Zwolle Joh. de Vollenhoe (1478); in Hasselt Peregrinus Barmmentloe (1480); in Leiden Henricus Henrici (1483), Gov. van Ghemen, who had come over from Gouda (1490), Cornelis Kers (1494), and Hugo Jansz. van Woerden (1494); in Haarlem J. Bellaert (1483), Joh. Andreae (1486), etc. We mention here only four

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of the most important and worthy, for Holland in particular : Jan Veldener, who was a real wanderer and whom we find in Louvain from 1473 till 1477, from 1478 till 1481 in Utrecht, in 1483 and 1484 in Kuilenburg, and from 1484 again in Louvain ;—Peter van Os from Breda, who was working in Zwolle from 1479 till after 1500 and whose business was afterwards continued by Tyman van Os ;—Richard Paraet or Paffroet from Cologne and working at Deventer from 1476, where by the year 1500 he had printed more than 350 books ;—and Gerard Leeu, who began in Gouda in 1477 and established himself at Antwerp in 1484, where soon the most industrious typographical centre of the Netherlands began to develop.

There were 33 printing-offices established in Belgium in the fifteenth century, 3 in Alost, where Dirk Martens and his partner Johannes de Westfalia in 1473 begin the series of the Belgian printers ; 11 in Louvain ; 4 in Bruges ; 1 in Brussels ; 1 in Audenarde ; 11 in Antwerp ; 2 in Ghent. It is only by chance that the first Belgian book was printed in Alost, the birthplace of Dirk Martens. The greatest centres were Louvain, Brussels, Bruges and then Antwerp. In Louvain, in the shadow of the ancient Alma Mater, we find successively : Joh. de Westfalia (1474-96), J. Veldener (1473-85), Conrad Braem (1475-80), Conrad de Westfalia (1473-76), Herman de Nassau (1483), Rudolf Loeffs (1483-88), Aeg. van der Heerstraten (1484-88), Lud. a Raveschot (1487-88), and Dirk Martens (1499-1502).

Not less than forty-one works were printed in Brussels between 1475 and 1487 by the *Clerici vitæ Communis*.

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In Bruges, Colard Mansion (1475), Jan Gossin (1484), Jan Brito (1477), and William Caxton (1478) were favoured by the intellectual and artistic atmosphere which prevailed at the rich court of the Dukes of Burgundy.

It was really in this old Flemish town that the history of English printing began. William Caxton brought the new art from there over to England, his native land. He was Governor of the Corporation of Merchant Adventurers in the Netherlands, and afterwards was in charge of diplomatic missions at the court of Philip the Good and Charles the Temerary. After a journey to Cologne, where he studied the technique of the art of printing, he came back to Bruges and established a printing-office there, in collaboration with Colard Mansion, where they published together: "The recuyell of the historyes of Troy." This was the first English-printed book. Thereupon followed in 1475 a second English printing: "Game and play of the chesse." The next year (1476) Caxton established himself at Westminster.

From 1480 began the typographical activity of Antwerp with Mathias van der Goes. This town became gradually the most powerful centre of life in the Netherlands at the period of the Renaissance, and the development of the art of printing followed this rise in power. Henceforth, the journeymen printers of the other Dutch countries were attracted here by the hope of making a fortune. Mathias van der Goes came from Holland and printed in Antwerp, by means of types from Delft, until his death in 1491. Dirk Martens came from Alost in 1493, printed in Antwerp till 1497, and went to try his fortune at

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Louvain, but came back to Antwerp in 1502, and remained until 1512. Hendrik de Lettersnider, who was also a letter-engraver, as his name implies, came from Rotterdam about 1496 and, in Antwerp, until 1500 published remarkable books which are regarded as models of letter-type. The most notable Antwerp printing-office in the fifteenth century was that of Geeraard Leeu. When he left Gouda in 1484 he first thought of settling in Bruges, where he probably wanted to succeed Colard Mansion, but he chose Antwerp. He printed here with real love for his art. His desire was to print not only in large quantity, but in particular to print beautifully. His work is distinguished for exemplary execution and artistic illustration. He died in 1493 as the result of a fight with one of his workmen. This sad fact is recorded at the end of the last book that was issued from his press: "Cronycles of the lande of England" (1493). With Geeraard Leeu starts the export to England of Antwerp printing in the English language.

Besides the printers already enumerated, there were working in Antwerp before 1500 Nicolas Leeu, probably the brother of Geeraard (1487-88), Nicolaas Kessler, who worked also in Basel, and Roeland van den Dorpe (1499-1500). Two other printers began in Antwerp at the end of the fifteenth century, but continued their work in the sixteenth century. Godfried Bac, originally a bookbinder, followed Mathias van der Goes, about 1493 till 1517. Adriaen van Liesvelt followed Geeraard Leeu, whose machinery and equipment he bought in 1493, and carried on his industry till 1517.

During two years only (1480-82) Arnold de Keysere

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(Caesaris) printed in Audenarde, after which he went to Ghent, where in 1490 his widow, Beatrice van Orroir, succeeded him at the head of the printing-office.

Meanwhile, Antwerp had reached its highest glory. It had become the town where, according to Guicciardini, all the nations of the known world felt themselves at home. Moreover, it was a pre-eminently national town, the intellectual capital of the Netherlands. Its influence extended over all the low lands by the sea. It was the town which set the fashion and from whence the books came.

Wouter Nyhoff and Miss E. M. Kronenberg, in their "*Nederlandsche Bibliographie*" from 1500 to 1540 (1923), and Miss E. M. Kronenberg, in her "*Eerste Aanvulling*" on this bibliography (1925), give us a remarkable picture of the Dutch typography of that time. Antwerp stands there at the summit. Out of a total of 2805 books published in Holland and Belgium together during the first forty years of the sixteenth century, there were 1483 printed in Antwerp alone, or more than half.

If we consider the production of Belgium alone, we see that Antwerp is responsible for more than eight-tenths of the total.

In all the other towns of South Netherlands we see that the importance of printing-offices decreases. Louvain descends to 7 workshops with 180 books; Brussels to 4, with 17 books; Bruges from 4 down to 1, with 9 books; Alost and Audenarde have no more printing-shops. Ghent increases from 2 to 4 printing-offices, but with a production of only 17 books. Antwerp springs suddenly from 12 printing-offices in

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the fifteenth century to 56 in the first half of the sixteenth century.¹

Apart from Antwerp Louvain was the most industrious typographic centre of Belgium, owing to her university. At that period we meet there Rutger Rescius, Bartholomeus Gravius, printer of the Catholic Flemish Bible—translation by Nicolaas van Winghe (1548); the Sassenius's, Rutger Velpius, Petrus Phalesius, and several others. In Ghent we must mention specially Joos Lambrecht and Hendrik van der Keere. The most important in Brussels are Thomas van der Noot and Michel van Hamont; in Bruges Huibert Goltzius, and in Ypres Joost Destree.

In the North Netherlands we notice nearly everywhere a decline, especially as regards the number of printed books. The leading personalities of this period are here: Simon Corver in Zwolle, Doen Pietersz in Amsterdam, Jan Berntsz in Utrecht, Jan Seversz in Leiden, and Albert Pafraet in Deventer.

Antwerp remains the great book town during half a century. There we notice first four printing-offices of importance which had begun their publications by 1500: Hendrik Eckert van Homberch, who came over from Delft, printed till 1524, and left a hundred books; Michel Hillen of Hoochstraten, who published between 1506 and 1546 more than 400 books; Adriaan van Berghen; and Jan Lettersnider or Jan Dinghensche who was working from 1500 till 1526. Here is the list of the other Antwerp printers enumerated according to their importance: Willem Vorsterman, Johannes Grapheus, Mart. de Keysere, Simon

¹ These numbers are naturally not definitive, as we do not know until now all the printers and publications of that time.

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Cock, Claes de Grave, Jacob van Liesvelt, Dirk Martens, Johannes Steels, Jan van Doesborch, Nicolaes van Oldenborch, Wwe. M. De Keyser, Hendrik Petersen of Middelburch, Govert Bac, Jan van Ghelen, Christoffel van Ruremonde, Mathys Crom, Johannes Crinitus.

For the sake of brevity we do not mention here the other printers, about twenty in number, who produced less than ten publications.

During this half century the Dutch book attained its complete Renaissance aspect. Everything which made the fifteenth-century works resemble manuscript books has now disappeared. By the title page, the printer's mark, the head-pieces, the tail-pieces, and numerous other ornaments, the book receives a modern character, and without being equal in æsthetical value to the printings of a Geeraard Leeu, it still remains an object of artistic care.

The whole intellectual life of Europe now finds expression in the Antwerp printing-press. We find in the books which are published from 1500 to 1540 a complete and vivid image of the eager search for new knowledge which then prevailed, and of the great reforms which were at that time going on in every sphere.

We see a striking example of this in the part that Antwerp plays in the spreading of the Bible in the popular tongue. Bibles, in which Erasmus applies his philological text criticism, and reformed Bibles after Luther's example, were published here in several modern languages. We can count, among others, a great quantity in English. There also appeared on the market a large number of controversial pamphlets for and against the Reformation.

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It was not very long before the Catholic Church warned against those publications, and Charles V. issued various edicts and proclamations, in which severe measures were indicated to prevent the spreading of Lutherism by means of the books.

Those decrees form the basis of the whole legislation on the book in the sixteenth century. Philip II. simply took over those orders, and applied them with greater severity against the Calvinist propaganda carried on by means of the book. This legislation is commented on in detail in D. H. Reusch: "*Der Index der verbotenen Bücher*" (1 blz. 98—Bonn, M. Cohen, 1883), en Chr. Sepp: "*Verboden Lectuur*" (Leiden, 1889).

Most of the printers now became very cautious. Some submitted all their theological publications to Louvain doctors for close investigation. Others, not so frightened, ignored the threats of the proclamations.

Thus began, in the history of the Dutch art of printing, a restless dramatic period, during which more than one of the printers became a victim of his own rashness. Jacob van Liesvelt was beheaded in 1545; Adriaan van Berghen in 1542. Others were punished with banishment, imprisonment, penalty, and so on.

Many of the heretical printings which were produced in Antwerp in those years were intended for abroad. They were sent to Denmark, Spain and Portugal by the help of the Marranos, who lived in Antwerp, and many of whom played an important part in the Reformation movement. Such books were also exported to England. Many writings of W. Tynedale were printed in Antwerp by Martin Lempereur

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(De Keyser); by Johannes Hoochstraten, who concealed his identity on this occasion under the fictitious name of Hans Luft (Marburg); by Christoffel and Hans van Ruremonde, who went to London to sell their Tyndale printings and were punished for it with prison and banishment (G. Duff: "A Century of the English Book Trade," London, 1905).

The Antwerp typography of those days was in every sphere of human knowledge unusually busy, and so a trade and professional tradition was formed there, that made of Antwerp, next to Paris, the most important book centre of Europe. This fame attracted, in 1549, the greatest of all Antwerp printers, the Frenchman, Chr. Plantin. "I chose Antwerp in which to establish myself," he once wrote to Pope Gregorius XIII., "because there is no town in the whole world which is more convenient and advantageous for the art that I wished to practise."

After a short time Plantin surpassed, by the importance and the number of his publications as also by their technical perfection, all that had been produced by the numerous other Antwerp printers. Plantin introduced entirely new methods of conducting the printing industry. Previous to this period the greatest Antwerp printers were working at most with two or three presses. He put into operation as many as twenty-two at once.

Guicciardini tells us that Plantin's business amounted, on an average, to a million francs per annum.

Not satisfied with his house at Antwerp, he opened branch establishments in Paris, in Leiden, and in Salamanca, and nearly opened one in London.

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Plantin was the first in Antwerp to conduct a printing-office as a great industry on capitalist principles. For the intellectual direction of his business we may regard him as a genius. His house was the centre from whence the most diverse scientific works were distributed over the whole of Europe. Especially during the first period of his activity, till the Spanish terror (1576), his bold spirit of enterprise knew no limits. He succeeded in gathering round him a select group of draughtsmen and engravers: P. van der Borcht, Marten de Vos, Jan and Hieronymus Wiericx and others, who gave to his editions a highly artistic character.

The magnificent work of Plantin and his successors can be appreciated in its full extent at the Plantin Moretus Museum in Antwerp, where, in the magnificent house of the old master, all that Plantin and his whole generation had there brought together is preserved, as if by a miracle.

Besides Plantin some other important printers were working in Antwerp in the second half of the sixteenth century. The generation of Nutius began about 1540 and continued its activity for nearly a whole century (1638). The Steelsius's carried on a very active book trade from 1558 till the end of the century. The Van Ghelens printed from 1519 till 1618. Gymnicus; A. Tavernier, who was also an excellent letter-engraver; Keerberghen; the Phalesius's, renowned music printers; the Verdussens, whose prosperity began in 1585 and lasted until the nineteenth century; Van Waesberghe and so many others worked together to make of Antwerp a centre that could rival Frankfurt, Cologne, Lyon and Paris. But above all rises

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Plantin, who was appointed by Philip II. as chief typographer and was charged with the examination of the capability of all those who wished to establish themselves as printers in the Netherlands. Plantin was the most brilliant representative of his profession. He had in every sphere predecessors and competitors in Antwerp, but he it was who always attained perfection in the most divergent sorts of books. All Antwerp Bibles and liturgical works were surpassed by his monumental "Polyglotte" and his splendid Mass books. The interesting series of the Antwerp herbariums is crowned by his publications of Dodoens, Clusius and de Lobel. The maps of Ortelius, the "Descrittione di tutti Paesi Bassi" of Guicciardini, his publications of Lipsius, etc., belong to the best of their kind that Antwerp has produced.

Plantin's work was continued in Antwerp in the seventeenth century, but the character and the appearance of the books which were now published there became very different compared with the earlier books. From the end of the sixteenth century Antwerp became the centre of the contra-Reformation movement, which found here its highest artistic expression in the work of P. P. Rubens, and the production of the books bears the undeniable mark of this new religious current. During the first half of the seventeenth century the Antwerp workshops were still in full activity. Jan Moretus, the son-in-law of Plantin and his immediate successor, printed in 1609 works to the value of 85,000 florins, and the business of Balthasar Moretus reached in 1637 an amount of 115,000 florins.

Most of the publications distinguish themselves by

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luxurious decoration in the Flemish high Renaissance style. Rubens himself collaborated with his friend Balthasar Moretus in the realization of that grand book-type. From 1608 till 1645 he drew a large number of sketches for all kinds of works which were published by the Officina Plantiniana.

Erasmus Quellin made the drawings from those sketches, and different members of the family Galle engraved them on copper.

Beside the Moretus family a large number of Antwerp printers worked in the same way: Trognésius, Van Tongeren, Wolschaten, Fickaert, Lesteens, Van Meurs, De Potter, Thieullier, Meyssens, etc., but typographical activity in the large seaport town diminished gradually and became insignificant in the eighteenth century. Publications about real progressive science became more and more scarce. They cleared the way for works on archæology, local history, and particularly on devotion and edifying instruction. Abraham Verhoeven brought in something new. He was the first to publish a newspaper in Belgium. He had begun from 1605 to publish, when it was convenient, all kinds of news about battles and other remarkable events. He published this news regularly from 1617 under the title of "Tijdingen" or "Gazette." The printer, Jan Mommaerts, published only in 1640 a French newspaper in Brussels, the "Courier véritable des Pays-bas."

The Scheldt was closed by the treaty of Munster in 1648 and then began for Antwerp an irrevocable decline, and the art of printing followed the town in her decline, as it had risen with her prosperity in the fifteenth century.

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From the seventeenth century the centre of gravity of Dutch typography was removed to the North. The northern provinces then became more prosperous in every respect. They were living their golden age. They had fought themselves free. By coming into possession of oversea colonies and by the development of their trade and industry at home, they attained to an extraordinary economic prosperity. Their universities were renowned throughout the whole of Europe. Just as at the end of the fifteenth and in the beginning of the sixteenth century Dutch printers came over to Flanders, so now the Flemish printers went to Holland and established themselves there, because conditions there were now more favourable. In this respect the list of the first acknowledged printers of the University of Leiden is typical. Among the first six are several Flemish: Willem Silvius, printer to the King in Antwerp, who went with all his equipment to Leiden, where he was appointed printer to the University by the Academical Council. Plantin followed Silvius in 1584, and for nearly two years managed the Academical printing-office of Leiden, while his son-in-law, Moretus, looked after the printing-office at Antwerp.

When Plantin left Leiden another of his sons-in-law, the Flemish Frans von Ravelingen (Raphelengius), was appointed printer to the University in 1586. His son Christoffel van Ravelingen succeeded him in this position in 1597. Jan Paedts was appointed in 1602, and in 1620 came the turn of Isaac Elsevier, grandson of Louis Elsevier, a Fleming from Louvain, who had left his fatherland in consequence of religious trouble.

Thus the famous family of the Elseviers have their

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roots in the South Netherlands and even to a certain extent in the Plantin house, where Louis Elsevier and his father Hans were working at the time of Plantin. On his arrival in Leiden Louis Elsevier established himself as a bookseller just opposite the University. In 1587 he received permission to build a shop on the grounds of the University. He carried on this business till his death in 1617. He was the founder of the house of Elsevier, which, from 1583 till 1702 in Leiden, from 1594 till 1629 in the Hague, from 1638 till 1684 in Amsterdam, and from 1667 till 1675 in Utrecht, acquired a European fame with the more than 5000 books that it printed, and of which A. Willems in his work, "Les Elsevier" (Brussels, 1880), and H. B. Copinger in "The Elzevier Press" (London, 1927) give a description. The influence of these printers was extraordinary, especially through their numerous editions of the most important Latin and French classics in duodecimo size. Everywhere the beautiful printing and the careful and nearly faultless reproduction of the text were praised.

The Elseviers contributed thus efficaciously to let Holland take the lead in the European art of printing in the seventeenth century.

The great firms of the Van Waesberghes and the Blaeus in Amsterdam also contributed to the world-fame of Holland. We must look for the oldest known printer of the generation of the Van Waesberghes in Antwerp between 1557 and 1559. About this latter year he went to Rotterdam and established there a printing-office that was soon prosperous and of which not less than sixteen Van Waesberghes followed each other as managers. From Rotterdam

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came representatives of this family and established themselves as printers in Amsterdam, in Dantzic, in Utrecht and in Breda. The Amsterdam house became very important, especially under the direction of Johannes Janssonius van Waesberghe (1651-81). He not only printed all kinds of books which could rival the Elseviers' publications, but he had also a trade in atlases and maps, taken over from his father-in-law, Johannes Janssonius, whose name he added to his own.

The series of the Blaeus (1618-72) was opened by Willem Jansz., who settled in Amsterdam at the end of the sixteenth century as a globemaker and cartographer and also printer. He combined his talents as scientific geographer with his technical printing knowledge. Besides his atlases and maps, which were appreciated for their exactness and their neatness, he published a number of scientific books, as, for instance, those of Grotius, Heinsius, Vossius, etc. In foreign book markets this Blaeu was a man of authority. He took his two sons as partners into the business in 1633, Joan, who had received an academical training, and Cornelius, who was in an office to learn the wholesale trade. The father, assisted by his two clever sons, could now think of the realization of his long-cherished dream. He began the monumental "*Atlas major sive Cosmographia Blaviana*," in eleven volumes. It was finished by Joan after the death of his father and his brother Cornelius. Joan Blaeu had a new printing-office built, which was so well and richly appointed that it was regarded at that time as the finest in Europe.

Besides these great firms there existed at that time, in Amsterdam, some others of less importance.

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Cornelis Claesz (1582-1609) was noted for his well-edited narratives of travel ; Judocus de Hondt (1597-1611), also a Flemish emigrant, cleared the way for the Blaeus by his beautiful atlases ; and later in the century (1676) the firm Wetstein, began its interesting activity. The contemporary printers in Deventer, Dordrecht, the Hague, Groningen, Leeuwarden, Utrecht, Rotterdam and other places, we will not mention, as our space does not permit, and, moreover, they do not throw any new light on the Dutch typography.

In Leiden, the firm Hackius was able to carry on business beside the Elseviers', and they even worked together when necessary (1668-1702). The Van Ravesteyns (1611-95), Jean Le Maire (1617-56), the Van Gaesbeeks (1655-1708), Pieter van der Aa (1684-1738), and the firm of Luchtmans (1683-1848) helped to continue to supply the Dutch Academy town with books.

For ampler information about the Dutch art of printing in the seventeenth and eighteenth century consult : A. C. Kruseman "Aanteekeningen betreffende den boekhandel van Noord Nederland" (Amsterdam, 1893).

The members of the house of Enschedé, the renowned letter-founders of Haarlem, occupy quite a peculiar place in the history of Dutch typography. At the end of the seventeenth century we find Isaac Enschedé (1681-1761) as a printer in this town. In 1726 Isaac took his son Johannes as a partner. Together they bought the letter-foundry of Hendrik Floris Wetstein of Amsterdam, to whom the letter-engraver and moulder Johan Michael Fleischmann had given his best work. The latter became employed

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by the Enschedés and helped to establish the renown of that letter-foundry. The love for their art led the Enschedés to form a most remarkable historical collection of moulds and letter-types. Whenever they had the opportunity they bought such material, and this way succeeded in establishing the Museum of old Dutch letter-cutting that can still be admired in their ancient house at Haarlem.

It was mainly with the data available in this collection that Ch. Enschedé could write his highly interesting book: "Fonderies de Caractères et leur matériel dans les Pays-Bas du 15 au 19^{ième} siècle" (Haarlem, 1900).

Hendrik de Lettersnider and Corn. Henricx are the oldest known masters in this art in the Netherlands. In the fifteenth century the former cut Gothic letter-types probably after the example of the writing used by the *Clerici Vitæ Communis*.

In the sixteenth century we find several type-setters, Flemish and strangers, who worked chiefly for Plantin. The Parisian, F. Guyot, became a citizen of Antwerp in 1539, and cast letter-types for Plantin from 1558 till 1579. The Antwerp Laurens van Everborgh, and others, did the same work for Plantin. Letter-dies and moulds were supplied by Pierre Hautin, of La Rochelle (1563-67); Guillaume Le Bé, from Paris; Robert Granjon, from Lyon (1563-70); Hendrik van den Keere, Jr., from Ghent (1570-80), and his workman, Thomas de Vechter. To Theod. de Borne in Deventer (1507? + 1530) belongs the honour of having printed the first Hebrew book in the Netherlands. In 1563 Cornelis van Bomberghen brought to Antwerp the Hebrew letter-

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types with which several members of his family had worked in Venice. Plantin became the owner of those letters in 1567. Already the year before he had printed with them three Hebrew Bibles, which bear also the name of C. van Bomberghen. For the "Polyglotte," Plantin had the large Hebrew letters cut, which he used along with the old ones of C. van Bomberghen. Amaat Tavernier, who lived in Antwerp in the second half of the sixteenth century, supplied Plantin and other printers outside Antwerp with excellent materials. He was evidently one of the last good letter-founders of the sixteenth century, for Plantin wrote in 1574 to M. Gast of Salamanca that, since the death of Guyot and Tavernier, he did not know any more capable letter-founders in the Netherlands.

In the seventeenth century it was specially Chr. van Dyck who distinguished himself in this art. He was a native of the Pfalz (1601), and we see him about 1640 as a goldsmith's assistant in Amsterdam. He began a business on his own account, but he met only with misfortune. In 1647 it seems that his situation improved as a result of his marriage, and he could begin a letter-foundry along with his goldsmith shop. Success did not yet favour him, but he remained true to his art, and made a great variety of excellent letter-types for several printers. When he died, about 1672, all his dies and moulds were sold by auction, and bought by Daniel Elsevier. Later they were in possession of the Amsterdam printers, Joz Athias, Jan Jacobsz. Schipper, Jan Roman, most of them eventually finding their way into the collection of Joh Enschedé.

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In the eighteenth century the most appreciated letter-engravers were J. M. Fleischmann and Jacques François Rosart. The former was born in Wöhrd, near Nürnberg, in 1701, and went into apprenticeship with the letter-founder C. Hardwig. In 1728 he entered the service of Isaac van de Putte in Amsterdam. After that he went to H. Uytwerf, where he became known as an extraordinarily clever man in his art. After that he worked for the Wetsteins, and finally for the Enschedés. F. Rosart was born in 1714 at Namur. He worked also for Enschedé. He excelled at engraving script type and typographical ornaments. Under the protection of Prince Charles of Lorraine, he established at Brussels a letter-foundry, which was continued by his son, also a good letter-engraver.

In 1779 the famous printer, J. L. De Bouters, took over this letter-foundry and secured the co-operation of its manager. After the death of Rosart, Belgium had no more outstanding letter-engravers. Our letter-founders are to-day still obliged to make their types in moulds which come from abroad, or which they imitate with permission of foreign firms. The Dutch are more fortunate in that respect. In recent years there have been founded here new national letters: in 1912 the "Dutch Mediæval," and in 1923 the "Erasmus Mediæval" of S. H. de Roos, and in 1925 the "Lutetia" of J. van Krimpen, which can easily compete for beauty and practical use with the imported foreign letter-types.

The eighteenth century was a less fortunate period for Dutch typography.

The lead in Europe, which was in the hands of

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Holland in the seventeenth century, slipped from her and passed over to France where, at the end of the century, Didot succeeded in printing again fine and artistic books. Nothing distinguished the technique of the Dutch books of those days. It became more and more an industrial work without individuality. The situation was still worse in Belgium. The intellectual life was at a low ebb, and the press possessed only a limited freedom which was very prejudicial to the art of printing. Therefore our printers regarded their art only from a commercial point of view, and they took not the least trouble to give their productions an æsthetic appearance. Their materials were nearly all of foreign origin.

Nevertheless a great activity still prevailed in several Dutch and Belgian printing-offices, because of the many reprints of French publications which were produced there. In "The Library" (V. 1893) Robt. Harrison wrote a very important study on "The French clandestine press in Holland in the seventeenth and eighteenth centuries." The Netherlands became the country of typographical counterfeit. Several free-thinking French writers who were hindered by their government in the spreading of their work applied directly to Dutch and Belgian printers. J. J. Rousseau, from 1755, sent several of his works directly to the printing-office of Marc Michel Rey of Amsterdam. French classics, such as Boileau, Molière, La Fontaine, Voltaire and others were also very much copied, but, alas, not with care as in the time of the Elseviers. The sole aim was to gain as easily and as much as possible.

In Belgium Liège was noted for its typographical

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counterfeits in the eighteenth century. Not only did the printers of Liège, such as Plomteux, about 1770, give the final blow to the trade of the Moretus's of Antwerp by taking away the clientele of the Dutch clergy, but the works of the French encyclopædists and philosophers (besides many very daring productions of secret literature) were also distributed from Liège and sold on a large scale at a low price. Among the Liège printers of the eighteenth century in the front rank is Jean François Bassompierre, who among other things published a meritorious "*Don Quichotte*." Brussels, which in the seventeenth century had some printers of good reputation, such as Eugene Henri Fricx (1665-1704) and the two Foppens, father and son, remained in the eighteenth century one of the most important centres of Belgium, thanks to the influence of the court and the foundation of the Academy under the reign of Marie Thérèse. We see there J. L. De Boubers, a skilled worker who produced in 1774 an edition of the "*Œuvres de Jean Jacques Rousseau*," illustrated by Moreau; Joseph Ermens, at the same time a clever bibliographer, and Jean Joseph Boucherie, who gave his name to the publication, in script, of the "*Heures nouvelles*," dedicated to Madame Royale de Lorraine (1760).

In the beginning of the nineteenth century all the Belgian productions were lacking in artistic character.

It was only about the middle of the century that some printers had their literary publications illustrated; J. E. Buschmann, who opened his printing-office in 1842, distinguished himself quite early in that respect. Also the Antwerp firm of Van Dieren, which published the works of H. Conscience, with

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good illustrations, aimed at improvement. And yet, none of the printers had the true conception of the æsthetic unity which must be realized in a fine book, between the choice of paper and type, surface of paper and illustrations. The decline of the art of book printing was general all over Europe, and William Morris was obliged to put his Kelmscott press into operation in order to point out the old artistic principles of the art of printing, and prepare a real Renaissance for the book in England and on the Continent.

The first characteristic symptoms of this renewed conception in Belgium are found in a few Flemish reviews, "*Van nu en straks*" (1893), of which the decorative artist Henry van de Velde developed the style, and the "*Vlaamsche School*" (1894), to which Jul. De Praetere, Edm. Van Offel, and especially Charles Doudelet, from Ghent, gave their artistic care. Soon "*Onze Kunst*" (1901) followed the same way, under the direction of Dr Paul Buschmann. From that time onwards we possess also some books with uncontested artistic character. We only mention a few of them: "*Verses*," of H. Teirlinck, decorated by Jul. de Praetere; "*Myn herte weet*" and "*Beatrys*," with drawings by Ch. Doudelet (J. E. Buschmann); "*l'Alphabet de N.D. La Vierge*" and "*Les Commentaires et l'idéographie du Jeu de Loto dans les Flandres*," with wood-cuts by Max. Elskamp (J. E. Buschmann); the Album of the Scalden, a circle of Antwerp artists, among whom we mention Collens, Dom, Jacobs, and others (De Vos et Van der Groen, Antwerp); "*Dolorine et les Ombres*" of Jean de Bosschère (J. E. Buschmann), and others, not for-

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getting the publications of recent years for which our younger engravers, as Joz. Cantré, Henri van Straten, Joris Minne, Joz. Leonard, and others, made artistic decoration. It is the firm, J. E. Buschmann, which has placed itself at the head of the printing of the modern fine book, followed by the firms of De Sikkel (Antwerp), Sélection (Brussels), Lumière (Antwerp), W. Godenne (Malines), etc. Also the firms of J. E. Goossens and Vromant (Brussels) are remarkable for less progressive but yet excellent publications.

A similar Renaissance of the printing art began in Holland about the same time and under the same influences. A. J. Derkinderen made stylish decorations in lithography for an edition of Vondel's "Gysbrecht van Amstel," by Erven J. Bohn of Haarlem (1893); G. W. Dysselhof made remarkable wood engravings for "Kunst en Samenleving" (Scheltema en Holkema, 1893); T. Nieuwenhuis adorned the poems of J. Perk for the firm S. L. van Looy (1897). They endeavoured to illustrate according to the spirit of the book, with good taste and without superfluity. It is to be noticed, however, that the typographical part of these books remained far inferior to the illustrative part. The choice of the letter-types did not harmonize with the adornments, and more than once the text was placed awkwardly in the allotted space.

It seemed more and more necessary to pay special attention to the mere typographical part of the book and to produce artistic work without the illustrations, exclusively by means of typography. The younger generation has solved this problem in a splendid manner. Evidence of this is given by the publications of De Zilverdistel (J. F. van Royen, a.o.) of the

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Kunerapress and of the Palladium, to which J. van Krimpen devoted his great talents ; of the firms Leiter Nypels and Boosten & Stols, both in Maastricht ; and of the society of Joan Blaeu (Amsterdam), of which the driving forces are J. F. van Royen and E. J. Haslinghuis. All these firms devote themselves mainly to the printing of works of art, which they wish to serve as models. In the same spirit is working the "Amsterdamsche graphische School," which not only produced capable workers but proved by a few small publications that they care for the æsthetic side of the subject. The Dutch book has also attained in the last years a far better appearance and a more logical structure than in the preceding century.

We see reviving there something of the old national tradition from the time of the incunabula and from the seventeenth century.

Since we remark that here the old seems to enlighten the new we refer finally to some periodicals which are wholly devoted in Holland and in Belgium to the study of the old books. In 1903 appeared, under the editorship of Emm. de Bom, J. W. Enschedé, P. C. Molhuysen and V. A. de la Montagne, the "Tydschrift voor Boek and Bibliotheekwezen" (Antwerp and The Hague). It worked somewhat in the spirit of "Le Bibliophile Belge," established in 1845, enlarged in 1866, and finished in 1879, but limited its interest more particularly to Flemish and Dutch typography and had a more scientific character. In 1912 "Het Tydschrift" became "Het Boek," under the editorship of Dr C. P. Burger, Jr., and V. A. de la Montagne. At the present moment this periodical steadily continues its excellent work. In 1923 the society of the

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“Antwerpsche Bibliophilen” began the publication of its review “de Gulden Passer,” wholly devoted to the history of the old Antwerp art of printing.

A serious movement on behalf of the Belgian book proceeds from the Musée du Livre (Brussels), which organizes exhibitions, publishes its own bulletin and books (among which a profusely illustrated “Histoire du Livre et de l’Imprimerie en Belgique,” which is published in parts);—from l’Œuvre Nationale pour la reproduction des manuscrits à miniature (Brussels), a branch of the Société des Bibliophiles et Iconophiles de Belgique, which published the “Album amicorum” of Otto Venius, the “Heures de Notre-Dame” of Hennessy, the “Mortifiement de Vaine Plaisance” of René d’Anjou, and other remarkable facsimile editions;—and from the Museum Plantin-Moretus, which endeavours by exhibition of modern fine books to serve its glorious tradition in our modern times.

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SPAIN AND PORTUGAL

BY JAMES P. R. LYELL

THE FIFTEENTH CENTURY

IN order to understand the comparatively late introduction of the printing press into Spain, the fact must be recalled that in Spain, among all the European nations, medievalism gave place to modern civilisation with far more effort, and amid the clash of more contending forces, than in any other country. Its geographical position, at the extreme west, was responsible in some measure for this, as the peninsula formed the final scene of the battle in which the old dispensation gave place to the new. When the nature of the country is considered, divided as it was by mountain ranges, unfertile tablelands, and varying climatic conditions, which had all conduced to long periods of civil and guerilla warfare before the last quarter of the fifteenth century, the late appearance of such a modern development as the printing press need occasion no great surprise.

The first book which at present is known to have been printed in Spain appeared in Valencia in the year 1474. Recent investigation suggests that Lamberto Palmart, a Fleming, working with some associates under the direction of a German called Jakob Vizland, was responsible for this early press. That Vizland was the master mind who looked after

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the commercial, as contrasted with the merely mechanical side of the press, is supported by the discovery of a contract made by him with a merchant in January 1476 for the supply of paper for the press, which at that date had produced some eight books. The first one, "Obres o trobes en lahors de la verge Maria," which Haebler attributes to the year 1474, was a quarto volume of sixty-six leaves, printed in roman letter, and this was followed by a "Comprehensorium" in similar characters, which actually bears the date of February 23rd, 1475, and is the first dated book known to have been printed in Spain. The singular point about these early productions at Valencia is that they were printed in roman and not in gothic type, but roman was soon to be abandoned for the gothic characters which often so faithfully reproduced the writing of the old manuscript books, and which for so long we shall see were a special characteristic of Spanish printing. Palmart's last book in roman type was in 1480, and from then until 1494 he worked with gothic, which was being used by his colleagues in the town, Alfonso Fernandez de Cordova, and other later printers such as Nicolas Spindeler, Hagembach and Hutz, Lope de la Roca, Miguel Albert, Trincher, and Cofman. Palmart's roman type was rough and extremely primitive, and it is not until 1497 that Fadrique de Basilea, a Burgos printer, produced a well-cut if somewhat heavy roman type. In the "Epistolae Illustrium Romanorum," etc., of Lucius Marineus, which he printed "Anno a partu Virginis, M.CCCC.XCVII" (1497), this type is shown to advantage, and is as good an example as any of the Spanish incunabula printed in

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roman letter. The only recorded copy of this book is in my possession, and a reproduction of the type will be found in "The Library World" (December 1923). In his "Stultiferae Naves" of c. 1501 Fadrique is found employing another fount of roman type.¹ Palmart's gothic type was characteristic of all Spanish gothic, being round in form and imposing in appearance. The second press established in Spain was in the city of Zaragoza. Mateo Flandro printed there an edition of the "Manipulus curatorum" on the 15th October 1475, which has the distinction of being the first Spanish book that is known to contain not only the date, but the name of the printer. In December of the same year Barcelona entered the field with a "Rudimenta Grammaticae" of Perottus, which was printed in a primitive roman type by Johannes de Salsburga and Paulo de Constantia, which type bears a strong resemblance to that used by Lambert in Valencia. There were other presses in Seville and Tortosa in 1477, a second press of Nicolas Spindeler in Barcelona in 1478, Lérida in 1479; while the first known piece of printing at Valladolid was a "Bula de indulgencias en favor de la iglesia de S. Salvador de Avila," printed "en el monasterio de Nuestra Señora del Prado" in 1481 (E.B.I., p. 7), which was produced in a small and insignificant gothic type.

The press at Seville in 1477, established by Alonso del Puerto and Bartolomé Segura, had the honour of producing in 1480 an edition of Rolewinck's "Fasci-

¹ See Lyell's "Early Book Illustration in Spain." London, Grafton & Co., 1926, p. 80. [N.B.—Further references to this book will be made by the letters E.B.I.].

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culus temporum," the first book in Spain containing illustrations. These were obvious copies of those appearing in a previous edition printed at Venice, and it is not until 1483 that Antonio de Centenera, at Zamora, produced the famous edition of Villena's "Los trabajos de Hercules," which, with remarkable cuts by a native Spanish artist, is one of the rarest examples of a fifteenth-century illustrated book.

The first decade of the Spanish printing press represents to a large extent the pioneer efforts of German and Flemish printers who migrated to a country where they rightly anticipated they would find a satisfactory financial reward for their enterprise. It was not long before they were able to initiate the native-born Spaniard into the art, but for some time the supply of type and blocks continued to come into the country by the recognised trade routes of the period, and if this had the effect for a little time of impressing a foreign style to the books and illustrations, it was not very long before a characteristic and wholly Spanish style of press-work was evolved.

From 1484 until the end of the century the chief printers of importance, in addition to those already mentioned, were Pedro Posa, Pedro Michael, and Juan Rosembach at Barcelona, Juan de Burgos at Burgos, Juan Luschner at Montserrat, an anonymous printer at Salamanca, the Compañeros Alemanes and Ungut and Polono at Seville, Juan Vasquez and Pedro Hagembach at Toledo, Pedro Giraldi and Miguel de Planes at Valladolid, and Pablo and Juan Hurus at Zaragoza.

A very brief summary of their work will indicate the strides that were made in the comparatively short

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period of sixteen years. Pedro Posa, the third printer to establish a press at Barcelona, was a Catalan priest, a fact which reminds us of the superior type, from a social and educational point of view, of almost all the fifteenth-century printers. Posa, like some of the other early Spanish printers, experimented with roman type, but as far as I know the only book which has survived is De Gui's "*Janua artis R. Lulli*," which he printed in 1482, of which apparently only two copies have survived, one in the Biblioteca Nacional at Madrid, and the other in the Cambridge University Library. The rest of his books were in gothic, and the title-page of Gerson's "*Imitatio Christi*," which he printed in 1482, is a very fine piece of work, and affords an illustration of the gothic type (two sizes) and fine decorative capitals used at the period. This title-page, however, is within a border of an Italian knot-work design, which is a careful copy from one of Ratdolt's books, printed at Venice in the same year. (For reproduction see E.B.I., p. 41.)

Pedro Miguel, in the same town, used three varieties of gothic, which perhaps are seen to the best advantage in his "*Usatges de Barcelona*," printed in 1495.

To do justice to the work of Juan Rosembach at Barcelona in the fifteenth, and for at least a quarter of the succeeding century, would require a fairly considerable treatise. He was a German from Heidelberg, and certainly one of the outstanding of the early Spanish printers. He was one of the pioneers in Spain of the production of illustrated books, characterised by a rugged simplicity, but at the same time profusely illustrated by well-chosen borders, decorative

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initial letters, and adequate illustrations. His " *Carcel de amor* " of 1493 has a title-page with a maximum of restrained decoration and a minimum of letterpress, which consists only of three words, and those xylographically produced. In 1500 he has to his credit a very remarkable edition of the " *Gramática* " of Nebrissensis, for the title of which (E.B.I., p. 19) he has employed the famous border used by Spindeler at Valencia for his edition of " *Tirant lo Blanch* " in 1490, a border which in my opinion was never equalled in any fifteenth-century book.

Juan de Burgos was the second printer at the town from which he takes his name, and his output was confined to books printed in gothic characters, of which he used three varieties. The best known of the books he printed was the second edition of Villena's " *Trabajos de Hercules* " in 1499, the illustrations in which bear no comparison to those in the first edition printed at Zamora.

Juan Luschner in 1499 and 1500 was responsible for a press in the Monastery at Montserrat, from which were issued a number of interesting liturgical books and works of the Fathers. It is interesting to note that printing is still being carried on in this monastery among the mountains near Barcelona.

Salamanca provides us with one of the most interesting anonymous presses in Spain in the fifteenth century. It worked both in gothic and roman characters in two periods, 1481-86 and 1491-1501. The output was considerable and the press-work excellent. For example, there will seldom be found a better specimen of fine gothic printing than is provided in the " *Constituciones y Estatutos* " of

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Diego de Deza, the title-page of which I have reproduced elsewhere. (E.B.I., p. 74.) The "Fiameta" of Boccaccio and other earlier productions were all notable for fine printing and good decoration.

The city of Seville had a considerable output of books during the century. Two firms of printers were chiefly responsible for this, and the first, the *Compañeros Alemanes*, consisted of Paul of Cologne, Johann Pegnitzner, Magnus Herbst, and Thomas Glockner. They worked from 1490 until 1503, and from time to time a partner dropped out and Pegnitzner became the sole survivor. They had no fewer than nine varieties of gothic type, but only one specimen of roman. Of their small gothic an example is found in the "De Conceptione b. Mariae" of 1491, attributed in the colophon to Ramon Lull, but the authorship of which is at least doubtful. This particular specimen of their press is not particularly inspiring, as they have dispensed with foliation and catchwords, and have left spaces for the capital letters. In passing, it is of importance to note that rarely if ever is a Spanish fifteenth-century book found illuminated by hand, as was so often the case in other countries. A far better example of the press is to be seen in the edition of Juan de Mena's "Las Trezientas" of 1499, where the imposing xylographic title is followed by a text in which three sizes of bold gothic are displayed to advantage.

The second firm that calls for notice was Meinardo Ungut and Stanislao Polono. They covered practically the same period as the "*Compañeros Alemanes*," but in the variety of their books and the quality of

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their work they were superior. Again, we find a variety of gothic types used, with a solitary roman fount. I take as an example of their early work the "Cinco libros de Seneca," which appeared on the 28th May 1491, and was the third book issued from their press. It is a folio volume, and the title illustrates the severe simplicity of the period. It consists of six lines displayed without any attempt at decoration, printed in a comparatively small gothic type which leaves at least four-fifths of the page entirely blank. The two sizes of type used in the book form a pleasing page, and by the judicious use of an alphabet of decorative capitals, white on a black background, combined with a chapter heading of six lines and a large decorative capital letter on the first leaf of the text, printed in red, a striking and beautiful effect is produced. Three years later they are responsible for a notable development in the history of the Spanish printing press, in the shape of a "Processionarium," produced on the 3rd of April 1494, which has the distinction of being the first book of printed music produced in Spain. A quarto volume of 114 leaves, it is printed throughout in red and black. The musical notes are printed in black on a stave of four red lines. The beauty and restrained magnificence of the book makes it a memorable monument of early Spanish typography.

I have dealt elsewhere (E.B.I., pp. 64-67) with some of this firm's illustrated books, and it only remains to add that when occasion demanded they could produce a legal text-book without a particle of decoration in which the printed page is a pleasure to peruse, as, for example, their edition of the "Repor-

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torium legum Hispaniae" of Montalvo, which they issued in February 1496.

The first printer in Toledo was Juan Vasquez, whose two founts of gothic were used for producing some papal indulgences and also for lighter literature in the shape of various books of verse. I have reproduced elsewhere (E.B.I., p. 17) a specimen of his type in the shape of a "Bula de indulgencias de la Santa Cruzada," which he printed in 1484, and which is one of the two earliest pieces of printing at Toledo. The type is small, and its appearance is not improved by being printed on vellum, although the insignificance of the type is mitigated by woodcut ornaments at the beginning and end of the document.

Pedro Hagembach was the most important printer at Toledo, and his "Missale Mixtum" (a Mozarabic Missal) is a specially fine example of sumptuous liturgical printing. A typographical rarity of the highest importance, of which Cardinal Ximenes is reported to have allowed only fifty copies to have been struck off, it is in addition one of the most ancient liturgies of the Latin Church. It contains a very fine Crucifixion cut and other fine decoration.

An edition of Cæsar's "Los Comentarios," in July 1498, is another but more simple example of his work. It has a dignified title-page, in which the words are surmounted by an excellent woodcut of the Arms of Spain, while Hagembach's device following the colophon is a striking piece of work.

The monastic press at Valladolid, to which reference has already been made, only lasted for three years (1481-83). Nine years later another press was at work in the town, conducted by Juan de Francourt,

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who produced three books between 1492-94. It was not until 1497 that Pedro Giraldi and Miguel de Planes established the only press of any importance. It was notable for a number of illustrated books of average merit.

We have already seen that Zaragoza produced in 1475 the first book containing not only the date of printing, but the name of the printer. It was the only book that Mateo Flandro printed, and it was not until 1481 that an anonymous press was at work, which has since been identified as having been under the control of Pablo Harus and Henrique Botel, who printed an "*Expositio Psalterii*" of Turrecremata, some indulgences, and other books of a religious nature. Pablo Hurus was joined by his brother, Juan Hurus, in 1485, and these two founded a press, which by themselves and their successors lasted long into the sixteenth century, and was one of the most famous in the country. The brothers were Germans, and originally came from Constance, a town which had intimate commercial relations with Spain at the time. I have dealt elsewhere (E.B.I., pp. 31-40) at some length with the very remarkable series of illustrated books which they produced during the last eleven years of this century. An "*Æsop*" of 1489, the "*Mujeres ilustres*" of Boccaccio in 1494, and the famous "*Viaje de la tierra sancta*" of Breidenbach, the pioneer fifteenth-century book of travel, are conspicuous examples from their press. They used no less than ten varieties of gothic type, a large number of decorative initial letters, and at least three variants of their interesting device. It was their illustrations, however, which made them famous. With a dis-

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cretion which was wholly admirable they laid under contribution the best woodcutters of Ulm and Augsburg. By the importation of the actual blocks they introduced to the Spanish public the first picture-books of any real merit or importance that had appeared. They were not merely content to appropriate the work of German masters, but where they thought it necessary they employed native Spanish artists. For example, in their edition of Breidenbach's voyage to the Holy Land there are a number of very well-designed Spanish adaptations from the "Delbecq-Schreiber" Passion, which had appeared in Germany as early as 1480. The transference of woodcuts among the early European printers forms an intriguing study, and no better example of its ramifications can be found than that afforded by the Hurus brothers.

In leaving the work of the Spanish printers in the fifteenth century I would quote what I have written before (E.B.I., pp. 320-1), that "a tribute should be paid to the energy and enterprise which characterised the early printers of Spain, whether immigrants from Germany or native-born masters of the craft. They lost no time, as a rule, in producing their literary wares in the vernacular. Their press-work was careful, and their types clear and well designed. Their decoration and illustrations were imposing from their very simplicity, while very seldom does one find in a Spanish incunable cuts which have no possible connection with the contents of the book, a practice not so uncommon in the early history of book illustration in other countries. Above all, they impressed upon their work a national character and atmosphere, which enables the student of early typography to

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identify, without much difficulty, a specimen of early Spanish printing where place and printer have been omitted."

I would now only add that it is perhaps the severe austerity of the printed page of a Spanish fifteenth-century book, coupled with the restrained magnificence of most of their decoration, which places them in a class by themselves, and enables them as a rule to be readily identified.

Any account of fifteenth-century Spanish printing is necessarily incomplete without reproductions of the types, title-pages, and illustrations from the books. For information as to where such reproductions can be consulted the reader is referred to the bibliographical list of books at the end.

THE SIXTEENTH CENTURY

In the history of Spain there has been no more glorious period than the sixteenth century, when she dominated Europe and held a commanding position in statesmanship and war, besides a progressively improving one in the arts of peace, among which the Spanish printing press was no exception. It is not possible, within the limits of an account like this, to do more than draw attention to some of the outstanding features of her sixteenth-century typography. The end of the fifteenth century had seen presses established in most of the large towns, and it was not long before other towns, such as Alcalá, Logroño, Medina del Campo, Madrid, and Segovia entered into competition with them. At this period the appearance of a Spanish printed book was almost standardized. It

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was usually folio in size and practically always printed in gothic type of a round shape and somewhat heavy appearance. If, as was often the case, there were no illustrations, the printer devoted his decorative skill to the title-page and the ornamental initial letters.

With a discretion that suited the grand and somewhat sombre page which resulted from the type employed, he made use of short titles, often xylographically printed, and where he did indulge in a woodcut upon his title, it was an imposing one of the Royal Arms of Spain, or a representation of the author presenting his volume to a monarch, or engaged in writing his book in a cloistered cell. A heavy ornamental border, white on a black background, often completed the title-page, and when the title consisted of more than half a dozen words, they were sometimes printed in red, with a marked and pleasing effect.

There are at least three outstanding and important features in the history of the growth and development of Spanish printing which had their birth during the first quarter of this new century. In the first place, the establishment of a press at Alcalá, conducted by A. G. de Brocar and others. In the second place, the wonderful work of the Crombergers at Seville; and in the third place, the no less remarkable progress made at Zaragoza under the auspices of Georg Coci, the successor to the press founded by the Hurus brothers in the preceding century. Further, as a matter of historic interest, the establishment, very late in point of time (*c.* 1566), of a press at Madrid should be noted, as about then commenced the transition from gothic to roman type throughout Spain, which was also destined to mark the gradual decay and deteriora-

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tion which later on characterised the work of her printers.

Alcalá de Henares (the "castle on the river"), the site of an old Roman fort, had formerly the Roman name of "Complutum," as it was the confluence or meeting-place of two rivers. In passing, it may be noted that it was the birthplace of Queen Catherine of Aragon, and also of Spain's illustrious son, Miguel de Cervantes. It was here that Cardinal Ximenes de Cisneros founded his famous university in 1500 and endowed it with a large revenue. It is not, therefore, a matter of any surprise that it provided congenial soil for the establishment of a printing press, which became a flourishing and notable part of the town's literary activities throughout the century. The actual first printer in the town was Stanislao Polono, who, with Meinardo Ungut, had previously worked in Seville. In 1502 he migrated to Alcalá and printed an edition of the "Vita Christi" of Ludolphus de Saxonia in four splendid volumes. The title-page is a fine piece of work, and consists of a cut depicting the translator, Montesino, presenting his translation to the Catholic kings (Ferdinand and Isabella), while beneath are the Royal Arms surrounded by a scroll in which the words of the title are inserted. The text is printed throughout in bold gothic in red and black, and the whole production forms a worthy commencement of printing in the town. It was not, however, to Polono that Alcalá owes her typographical reputation.

Arnold Guillen de Brocar, who probably came originally from the South of France, had printed at Pamplona from 1489 to 1499, and at Logroño in 1503. We find him printing first at Alcalá in 1511, and his

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introduction was due to Cardinal Ximenes, who was then engaged in the preparations for the production of his monumental work, the Complutensian Polyglot Bible. The history of this famous edition of the Scriptures has been written elsewhere,¹ but to Brocar is due the typographical excellence of the six large folio volumes which comprise the complete Bible. The special feature is the very remarkable and magnificent fount of Greek type used in the New Testament volume, which appeared in January 1514. It is supposed to have been based upon the form of the letters used in an old manuscript in the Vatican Library, which the Cardinal had borrowed from Pope Leo X. Brocar's original fount contained no accents except the acute, but in April of the same year, when he produced his "Chrysoloras," he provided a complete set of accents. As recently as 1903 the late Robert Proctor printed an edition of the "Oresteia" of Æschylus from type he had specially made, and which was based upon this type of Brocar. Brocar's other books included "Las Epistolas" of St Catherine of Sienna in 1512, and an edition of the "De Senectute," etc., of Cicero, which seems to be the first of any of that author's works printed in Spain. It is notable for the type in which it is printed, a *letra transicion*, which is almost but not quite a roman type. He seems to have used this in a few books from 1516 onwards. To anyone interested in the woodcut devices used by Spanish printers, those adopted by Brocar are of considerable interest and artistic merit (E.B.I., pp. 94, 223, 261, 263, and 267 for reproduc-

¹ See Lyell's "Cardinal Ximenes . . . with an Account of the Complutensian Polyglot Bible." London, 1917.

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tions). Brocar from time to time carried on printing establishments at Pamplona, Valladolid, Toledo, Logroño, and Alcalá, and is found on occasion running two or more of them at the same time. I am of opinion that, apart from the "Complutensian Polyglot," his finest piece of work is his edition of Perez de Guzman's "La cronica del Rey Don Juan II," which he printed in Logroño in 1517. One of the most notable of the Spanish chronicles, Brocar was commissioned to print it by the Emperor, Charles V. A large and imposing folio volume, printed in red and black, in handsome gothic characters, and with some good woodcuts, notably one of the Crucifixion, signed I.D., it is really a great example of the early Spanish printing press.

Miguel de Eguia, who had also printed at Logroño, was Brocar's immediate successor at Alcalá. He in turn was followed by Juan de Brocar, and their work in the main worthily upheld the traditions of the press. Space does not permit of dealing with it in any detail, but of Eguia, his "Expositio Libri Missalis" of Pedro Ciruelo, printed in 1528, is a good example, while Juan de Brocar was a prolific printer, who besides using the ordinary gothic type, produced in 1546 the "Publica Laetitia" of Gomez de Castro in roman type, with a series of illustrations which are not very common in Alcalá books.

The name of Cardinal Ximenes has always been associated with some of the finest productions of the Alcalá presses, and even after his death, his life, written by Gomez de Castro, "De Rebus Gestis a Francisco Ximenio Cisnerio," and printed in 1569 by Andres de Angulo, affords one of the finest specimens of

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roman type ever produced in Spain. Mr Updike, the well-known typographical expert, describes it¹ as "a pure and elegant roman type which might have come from an Italian press, so spirited and delicate is the roman font used for it, compared with most contemporary Spanish roman fonts, and so simple and elegant is it in composition and imposition. . . . Its simple text pages are almost Jensonian in their reliance upon pure typography for beauty."

In addition to its typographical excellence, the book was so well written that for long it was used as a prose text-book for Spanish students.

SEVILLE AND THE CROMBERGERS

Jacobo and Juan Cromberger were the two printers who made the printing press at Seville famous in the sixteenth century. I have dealt at length elsewhere (E.B.I., pp. 157-179) with their remarkable record, and here I can only indicate very briefly some of the fine books which they produced. Their speciality was *belles lettres*. Jacobo Cromberger is found printing at Seville in conjunction with Polono in 1503, but the partnership did not last long, and in 1504 he was at work on his own account. From that year until 1528 he produced a large number of books, among which may be mentioned "La historia de los nobles cavalleros Oliveros y Artus de Algarbe" in 1507, the "Carcel de amor" of San Pedro in 1509, the "Esplandian" of 1510, the "De los remedios contra fortuna" of Petrarch in 1513, and an illus-

¹ D. B. Updike, "Printing Types." Cambridge, U.S.A., 1922 (vol. ii., p. 7).

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trated edition of Padilla's "Retablo de la vida de Cristo" in 1518, which, among other fine illustrations, has a full page occupied by twenty compartment cuts representing scenes in the life of our Lord and figures of the Saints. In addition to these, he printed books of American interest, as for example, the famous "Carta de relacion" of Cortes in 1522. He had previously, as early as 1511, printed the First Decade of Peter Martyr's first and famous history of America. Although Cromberger, as far as is known, was never himself in the New World, there is no doubt that in 1544 a "Doctrina breve" was printed in Mexico, with types that had been used in his Seville establishment. Jacobo Cromberger was a German, and nearly always mentioned the fact in his colophons. His son, Juan Cromberger, married a Spanish lady, and the German origin of the family ceased to be advertised. He is responsible for two or three editions of one of the most diverting picture-books of the period, Bidpai's "Libro Llamado Exemplario." The work contains about 120 cuts, illustrating with inimitable humour the various fables and stories.

Another class of literature to which Juan Cromberger devoted his attention was the Romances of Chivalry, the output of which in Spain during this century was so enormous. His edition of the far-famed "Amadis de Gaula" in 1535 is a good example of his work in this type of literature. Folio in size, the words of the title are printed in red, and there is also a fine woodcut representing a knight on horseback with attendants, and a castle in the background, on this title-page (E.B.I., p. 170). There are 139 smaller cuts throughout the book, which is printed in

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a well-designed gothic type. His illustrated books were always interesting, and in one of them, the "Epistolas del Glorioso doctor sant Hieronimo," printed in 1537, he had the enterprise to reproduce a full-page cut of St Jerome and the lion, with other detail, from the original metal block which had first been used in Germany about 1472, and had obviously been brought to Spain by his father or some other German printer. The Cromberger press lasted well over half a century, and will always occupy an honoured position in the history of the European printing press in the sixteenth century.

ZARAGOZA AND THE WORK OF COCI

George Coci was another of the early Spanish printers who habitually described himself in his colophons as a German. He produced in 1500, in conjunction with Leonard Hutz and Lupus Appentegger, the "Officia Quotidiana," a very finely illustrated book consisting of numerous cuts and over one thousand beautiful initial letters. In this book is seen to perfection the art of the printer in producing a printed page which in text and decoration was almost an exact copy of the best class of medieval manuscript. In 1506 or earlier Coci was working on his own account, and in 1508 we find him producing the first known edition of the first four books of "Amadis de Gaula," the only surviving copy of which is in the British Museum.

Among classical authors he was responsible for a fine edition of Livy in 1520, a monument of good printing and remarkable for a spirited series of wood-

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cuts which had previously been used at Mainz in an edition printed by J. Schoeffer in 1505. The title-page in green, yellow and red is imposing, but in this direction he surpassed himself in the following year, when in the "Flos Sanctorum" of Pedro de la Vega, he printed a title-page in five colours, which is easily one of the most remarkable examples of multi-colour printing in Europe at the time. (For a full description of this book and its illustrations see E.B.I., frontispiece and pp. 129-140.)

In poetry he issued an edition of the "Cancionero" of Encina in 1516, and among his historical books, one of the letters of Fernando Cortes in 1523. His liturgical works are numerous, and as an example the "Misal Jeronimiano" of 1511 deserves attention. Quarto in size and beautifully printed in gothic type in red and black, the music is on a four-line red stave. There are numerous cuts, some of them within compartment borders, and on the title there is a good cut of the Saint with the lion, after Durer. The editions printed at this town are the only known missals of the Hieronymites, and are an adaptation of the ordinary Roman use.

In lighter literature Coci's work is found represented in editions of the "Carcel de amor," the 1523 edition of which book has a series of interesting cuts of Italian design. Coci died about 1546, and his press was continued by Pedro Bernuz and Bartholome de Nagera. The Coci press, like the Cromberger press at Seville, formed a notable epoch in the history of Spanish printing, and affords a conspicuous example of fine book production, as regards press-work, decoration and illustrations.

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In the second half of the century printing began to deteriorate all over Spain, and if we make an exception in respect of some fine work done at Granada in roman type by Xanthus Nebrissensis, the son of the famous grammarian, historian and scholar, there is nothing further that need detain us.

THE SEVENTEENTH CENTURY AND AFTER

The establishment of a press at Madrid in 1566 may be regarded as the beginning of the end as far as the general use of gothic type was concerned. At the beginning of the seventeenth century roman type was in general use, and with it is often found italic. A typical example of this can be seen in the 1608 edition of "*Don Quixote*," printed by Juan de la Cuesta at Madrid. The types are quite uninteresting, and any serious attempt at decoration is conspicuous by its absence. Another famous book, the "*Primera parte de Guzman de Alfarache*," printed in 1600 at Madrid by the heirs of Yniguez de Lequerica, was served even worse in its typographical dress, its drab roman type affording no possible enjoyment to the reader. Cervantes and the other great writers in the seventeenth century owe little or nothing to their printers. One is at a loss to mention any really good work during the century. It was an age of respectable mediocrity, and it was not until the eighteenth century that "*Don Joaquin Ibarra impresor de Cámara de S.M. y de la Real Academia*," as he describes himself, produced roman and italic types of a beauty to which Spain had long been a stranger. His "*Don Quixote*" in four folio volumes in 1780, and his

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"Salustio" of 1772, are very notable examples of fine printing and decoration. Of the "Sallust," Mr Updike has described it as "one of the finest volumes produced in any country during the eighteenth century." As regards the former, it was only fitting that Spain's most illustrious writer should at length have his world-famous masterpiece presented in a fitting dress.

This "Academy" edition of 1780 has received at the hands of all the bibliographers of Cervantes lavish and unstinted praise. I can do no better than again quote from Mr Updike, who says: "The first volume opens with a simple title-page set entirely in roman capitals, without engraved decoration. The complicated preliminary matter—that introductory to the actual book, and the preface, poetry, etc., which form part of 'Don Quixote'—is managed with delicacy and restraint, and with an entire absence of fussiness. As to type, the opening parts and text are set in a kind of modernised old style roman and italic. Where poetry occurs in the text, it is set in italic, as are the 'arguments' to chapters. All the type used in the book hangs together wonderfully, and the fonts are so full of colour, and so original and lively in cut, that they seem like the work of a man unhampered by professional and mechanical traditions. . . . Engraved head-bands, head-pieces, and tail-pieces ornament the 'Prologo de la Academia' and the text, but otherwise the book is severely plain, except for a portrait and many full-page platés designed and engraved, like the more agreeable decorations by Spanish artists. . . . And this, the finest edition of 'Don Quixote' that has

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ever been printed, was *wholly* the product of Spanish skill."

Modern Spain is capable of fine printing, and in the present century some good work is being done, but, like other European countries, it is the exception rather than the rule.

Among these exceptions may be mentioned the city of Barcelona, which has produced in the present century some excellent work. As an example, let me take the finely produced bibliographical Review, known as "*Bibliofilia*," which, under the extremely competent direction of Señor R. Miquel y Planas, has appeared from time to time since 1911. It is a model of good printing, and the reproductions of early woodcuts and title-pages with which it is adorned leave little to be desired. A study of its pages and of some of the modern work which is reproduced will show that Catalonia in general and Barcelona in particular, in typography, as well as in so many other respects, continue to be in the van of progress. As an example of an adequately printed and well illustrated bibliography, mention may be made of Dr Jordi Rubió's "*Noves Butlles Catalanes Incunables*," printed in Barcelona in 1923, while Albareda's bibliography of the press at Montserrat in the fifteenth and sixteenth centuries, printed in the monastery itself in 1919, is a model of which any modern press in any country might be justly proud.

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In concluding this necessarily very incomplete survey of the Spanish printing press, a word must be added as to the press in Portugal. In the fifteenth century, Rabbi Elieser was at work at Lisbon, printing books in Hebrew characters from 1489 until 1497. They were not particularly pleasing in appearance, and the class of paper employed did not enhance the effect. The "Orden de las oraciones of Abudarham," which he printed in 1495, is a typical example. In the same year a really fine piece of work was produced by Valentin Fernandez and Nicolao de Saxonia. The book, a "Vita Christi" of Ludolphus, has been truly described by Haebler as "Este libro espléndidamente impreso de rojo y negro es uno de los incunables más hermosos que en toda la Peninsula se han ejecutado, digno de la protección que los Reyes de Portugal dieron á sus productores." It is the first book printed in the Portuguese language, and the first book printed in that country with any pretence at illustration. Its four volumes have some fine woodcuts, one of the Crucifixion, adapted from a copper engraving by Master E. S., of 1466, being specially noticeable. A cut of King John II., depicting the pelican with her young, is also a well executed piece of work. The scroll borders which surround some of the pages are very beautiful, and in every respect these volumes stand in a class by themselves on account of their excellent gothic type, well displayed pages, and handsome decoration. In the succeeding century Luis Rodriguez, in the same town,

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produced creditable work, notably his "Verdadera informaçam das terras do Preste Joam," in 1540. Another notable sixteenth-century printer at Lisbon was German Gallarde, whose "Florando de Inglaterra," in 1545, compares favourably with similar romances of chivalry produced in Spain at the same period. Antonio Alvares was another Lisbon printer who exercised his calling from 1586 to 1600. To him is due the Lisbon printed account of the Armada which Philip II. ordered to be published in May 1588 before the departure of that ill-fated fleet.

Another important press at this period was at work at the university town of Coimbra, and Joas Alvares and Antonio de Barreira both printed in that city. An interesting example to us of the work of the former is found in his "Historea da vida e martyrio" of St Thomas à Becket, printed in 1554. In this book he uses both roman and gothic type. In the seventeenth century Iorge Rodriguez, at Lisbon, printed the actual second edition of "Don Quixote" in 1605, the year that the famous first edition appeared in Madrid. It has every appearance of having been produced in a hurry, and, like the various Spanish editions of the book, does very scant justice, from the typographical point of view, to the immortal genius of the author.

The Decree which established the *Imprensa Regia* is dated 24th December 1768, and the installation was so quickly completed that work was begun in the early part of the year 1769. The press was put in charge of Miguel Manescal Da Costa, an exceedingly clever typographer, whose printing works as well as the foundry of J. de Villeneuve were bought up for

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the State Institution. A school of engraving was adjoined and put in charge of Joaquim Carneiro Da Silva, who was an expert engraver.

Between 1769 and 1801 some twelve hundred and thirty volumes were printed under Da Costa's directorship, among them being several very important works. After Da Costa's death the Institute was run under a joint administration. In 1810 a general administrator was appointed in the person of Joachim Da Costa, who managed the printing office, with a short interval, until 1833. With the fall of Dom Miguel, the State Printing Office came under the direct control of the Minister of the Interior. The finest period of the Institution was from 1838, when Jose Frederico Pereira Marcecos was appointed administrator. He was a much travelled man and used his knowledge to great advantage in improving printing in Portugal. After his death in 1844 the work was entrusted to his brother, Firmo Augusto Marcecos.

The history of the printing press in Portugal has yet to be adequately written, but there is nothing to indicate that the general lines it followed were materially different to those of its near neighbour.

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SPECIAL SUBJECTS

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GREAT BRITAIN AND IRELAND

BY HENRY R. PLOMER

ENGLAND.—The art of printing was brought to England in 1477 by William Caxton, a mercer. Of Caxton's early life very little is known. He was born in the Weald of Kent and received a good education. As soon as he was old enough he was apprenticed to Robert Large, a mercer in London; but before his time was out his master died and before the end of the year 1441 Caxton left England. For the next thirty years he followed his trade as a mercer in Brabant, Flanders, Holland and Zealand, travelling from place to place in these countries, having his headquarters at Bruges, which was the chief mart of the cloth and woollen trades.

During that long exile he never forgot his native country. Much of his spare time he spent in reading, and he never picked up an interesting book in French, Latin, or Dutch, without a desire to translate it into English. One such book was "*Le Recueil des Histoires de Troye*," a manuscript written by Raoul le Fevre: but, after translating a few pages, he found it harder work than he had anticipated, and laid it aside. Fortunately for the world he did not destroy the sheet. On the 15th June 1467 the reigning Duke of Burgundy, misnamed Philip the Good, died, and was succeeded by his son Charles. In the following year a marriage was arranged between the new ruler and Margaret,

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the sister of Edward IV., King of England, and was celebrated at Bruges amid great rejoicings. Caxton, as Governor of the English nation at Bruges, was probably presented to her on that occasion, and shortly afterwards he left Bruges and entered her service.

Margaret was a highly educated woman with a love of books, and Caxton on one occasion told her of his attempt to translate the "*Recueil*." She showed great interest, and recommended him to try and finish it, promising to amend his rude English for him. The result was that he finished the translation during a visit to Cologne in the following year, and his eyes being dimmed with looking on the white paper, and his hand weary with writing, he resolved at his own expense to learn the art of printing.

Recent discoveries have proved that his stay at Cologne extended from July 1471 to Midsummer 1472, a period of time sufficient for him to have learnt the elementary part of a printer's art and to obtain some idea of the cost of setting up a printing office. This he did by helping a printer in Cologne to set up an edition of Bartholomaeus' "*De Proprietatibus Rerum*," in Latin. He then returned to Bruges and presented Margaret with his finished translation of "*Le Recueil*," and possibly told her at the same time of his intention to print it. His next step was to get into touch with Colard Mansion, who was noted for the beauty of his handwriting, and who had been employed for several years in copying rare manuscripts for Louis de Bruges, a wealthy collector of books.

Caxton and Colard Mansion agreed to set up a

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printing office at Bruges. Their first fount of type, known to students as Caxton's No. 1, was a script or secretary, modelled on the hand of Colard Mansion and believed to have been cast by John Veldener of Louvain.

With this they printed, in 1474, the "*Recuyell of the Historyes of Troye*," the first book printed in the English language, and in 1476 the "*Game and Play of the Chess Moralized*," a translation by Caxton of the "*Liber de Ludo Scachorum*." In that year the printers obtained a second fount of type, known as Type 2. This showed much improvement on the earlier fount, both in cutting and casting. It was used for the first time in printing "*Les Quatres Derrenieres Choses*."

Caxton then resolved to return to England. He accordingly left Type 1 with Colard Mansion, and bringing with him Type 2 and other necessary material and an assistant named Wynkyn de Worde, and having secured premises in the Almonry of Westminster Abbey, known by the sign of the "*Red Pale*," he set up as a printer.

The first book with a date that came from his press was the "*Dictes and Sayengis of the Philosophres*," which was finished on the 18th of November, 1477; but this had been preceded by several small pieces, in quarto, printed without date, but in Type 2. The titles of these show clearly Caxton's desire to put into the hands of English readers the writings of the leading English authors. Two, "*Anelide and Arcite*" and the "*Temple of Brass*," were from the pen of the poet Geoffrey Chaucer. Several were by John Lydgate. Another was of an educational character—a

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translation of Cato's "Distichs" made by Bennet Burgh, Canon of the chapel of St Stephens in Westminster. Another book without date, which is believed to have been printed before the "Dictes and Sayengis," was the "Book of Jason," a folio of one hundred and fifty leaves. This Caxton had translated from the French.

From this time, until his death in 1491, Caxton printed, or caused to be printed for him, one hundred books, and probably this does not cover the extent of his work as a printer, as he is known to have printed the "Metamorphosis" of Ovid, of which every copy has perished.

He used eight founts of type. Nos. 1 and 2 have been noticed above. Type 3 was a Black Letter useful for printing Service books. Type 4 was similar to Type 2 but smaller in body. Type 5 was a modification of Type 3. Type 6 was cast from the matrices of Type 2. Types 7 and 8 were Black Letter.

The exact date of Caxton's death is unknown, but it took place probably towards the end of 1491. He had just finished the translation of the "Vitas Patrum."

Caxton's work as a printer must not be judged by the standard of printing in Europe at that time. His chief aim was to get into print for English scholars and students the best literature not only of his own country but of any other, and so long as his books were clearly and correctly printed he did not trouble about such details as pagination, signatures or headlines, and none of his books had a title-page although these had been in use on the Continent for several years. Neither did he trouble overmuch about the

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adornment or illustration of his books. He is known to have used only one border, which is seen in the "Fifteen Oes," and the woodcuts which he introduced for the first time into "The Mirrour of the World" in 1481 were very poorly executed. His device consisted of his initials with a central design, which is probably a merchant's mark.

Caxton was also a bookbinder. His chief dies were a winged dragon or a conventional flower in a lozenge-shaped frame.

Within two years of his settlement at Westminster another printer came to England and settled at Oxford. He is generally supposed to have been Theodoric Rood of Cologne. The first book printed at Oxford was the "Expositio in Symbolum apostolorum," which was dated the 17th December 1478, although the omission of an X from the date made it appear to have been printed ten years earlier. The colophon contained no printer's name. The "Expositio" was followed by the "Nicomachean Ethics," issued again without printer's name in 1479, and the "De Peccato Originali" in March 1479 [*i.e.* 1479-80].

The first book containing Rood's name as printer was the "Commentary," by Alexander of Hales, on Aristotle's "De Anima," which was finished on the 11th October 1481.

Rood continued at work until 1485 when he disappeared, and there was no further printing in Oxford until the sixteenth century.

About the year 1479 there appeared a small book entitled "Super elegancias Tullianis," which bore no date nor printer's name, but merely the colophon "Impressum fuit opus hoc apud Sanctum Albanum."

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Wynkyn de Worde, Caxton's successor, in an edition of the "Chronicles of England," printed in 1497, referring to this book, stated that it had been printed "by one some tyme scole-mayster of Saynt Albons." Now there happened to be a house in the precincts of Westminster Abbey, known in Caxton's time as "St Albones," and it was occupied by the schoolmaster of the Almonry named Otnel Fulle or Fuller. But as there is no evidence to show that Otnel Fuller knew Caxton or ever had a printing press in his house, the St Albans mentioned in the "Tully" is generally taken to mean the Hertfordshire town of that name.

The best known work of the St Albans press was the "Boke of St Albans," a small folio of ninety leaves printed in two founts of type, one a close imitation of Caxton's Type 2 and the second undoubtedly cast from the matrices of that printer's Type 3. The work dealt with hawking, hunting, and heraldry, and contains the earliest example of colour printing in England, the arms being printed in inks of various colours. This press ceased work in 1486, eight books in all having been printed there.

But the most formidable rival Caxton had to meet was John Lettou, who started a press in the city of London in 1480. His type has been identified as the same as that used in 1478 and 1479 in Rome by a printer named John Bull. It was first used by Lettou to print copies of John Kendale's "Indulgence against the Turks." Other copies were printed by Caxton. In the same year Lettou also printed for a certain William Wilcock, a priest, two folios of an educational character, "Questiones Antonii Andreae super duo-

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decim libros Mataphisice," and "Expositiones super Psalterum." These were printed in a neat small gothic, with two columns to the page.

Lettou is next found in partnership with Wilhelmus de Machlinia, a native of Mechlin. Together they printed five law books in a cramped Black Letter with many contractions. Then Lettou dropped out of the partnership and Machlinia continued working alone. He is found first in Holborn, and then by Flete-brigge.

Twenty-two books or editions have been traced to his press, the majority being law books. None of them has a date and there was no uniformity in the printer's methods, some having headlines and signatures and others being without, but to Machlinia belongs the credit of introducing the printed title-page into England.

Machlinia also had a small and graceful border of flowers and foliage engraved on wood which he used in a small "Horae." This afterwards passed into the hands of Richard Pynson, who succeeded to the business about 1486.

Richard Pynson was by birth a Norman who is believed to have come over to England in 1482 and set up as a glover in the parish of St Clement Danes. When or how he became acquainted with Machlinia the printer is unknown, but it seems possible that he was the printer of the "History of the Siege of Rhodes," which was printed with a fount of type used by Lettou and Machlinia, which had been retained by Machlinia.

The earliest example of Richard Pynson's printing is a reprint of Caxton's edition of Chaucer's "Canter-

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bury Tales," a handsome folio printed throughout with two founts of type and illustrated with coarsely-cut woodcuts.

Two year-books of the reign of Edward IV. are also amongst his early work and contain his first device, which was similar to that of the Rouen printer, Le Talleur, whom he had commissioned to print for him an edition of Littleton's "Tenures" and Stathams' "Abridgement," and in whose office he is believed to have worked for a time.

Pynson's first dated book was the "Doctrinale" of Alexander Grammaticus, finished on the 13th November 1492. From this time to the end of the century he printed many notable books, including a handsome Sarum Missal for Cardinal John Morton in 1500.

Owing to a cowardly assault made on him by his neighbours, about this time, he gave up his printing office in St Clement Danes and moved into Fleet Street.

Meanwhile Wynkyn de Worde had become the legitimate successor of Caxton at the "Red Pale" in Westminster. Owing probably to some delay in settling up Caxton's estate, his output for the first two years amounted to only five books. In 1495 he issued seven books, including the "Vitas Patrum," left by Caxton in manuscript. It was printed in double columns with Caxton's Type 8, and was profusely illustrated. Another interesting book was the "De Proprietatibus Rerum," which, although undated, is believed to have been printed in 1495. It contained the statement that Caxton had learned to print in Cologne, and also that the paper on which

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it was printed came from an English papermill owned by John Tate.

In 1496 fourteen books and five issues of the Statutes came from De Worde's press. The most notable book was a reprint of the "Book of St Albans," printed with a fount of type obtained from Godfried van Os, a printer in Gouda. For some reason De Worde never used it again.

During the year 1500 he printed four notable romances: "Bevis of Hampton," "Sir Eglamour," "Guy of Warwick," and "Robin Hood," only known by fragments found in old bindings. Before the end of the year he left Westminster and settled in Fleet Street.

One other Westminster press at work in the fifteenth century remains to be noticed. At the end of an edition of "Albertus de modis significandi," issued in 1496, is a printer's mark containing three sets of initials: I. N. standing for Julian Notary, I. B. for Jean Barbier or Barbour, and I. H., supposed to stand for Jean Huvin, a printer at Rouen. They appear again in a Sarum Horae printed in 1497. In 1498 Jean Huvin's initials were cut out of the device, from which we may infer that he had left the firm, and Notary and Barbier then moved to Westminster and printed a Sarum Missal for Wynkyn de Worde. In 1499 Jean Barbier also left, and the books issued in that year bore only the name of Julianus Notarii; and when, in 1500, Wynkyn de Worde left Westminster, Notary followed his example and moved into Pynson's old premises in the parish of St Clement.

A marked improvement in the art of printing in

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England began with the opening of the sixteenth century. Hitherto the printers had been few, and most of them were foreigners; but from 1501 the number of Englishmen and Welshmen who took up the craft increased steadily, until in 1534 Parliament was able to annul the Act of 1484 as a sufficient number of skilled natives had adopted the trade. The majority of these, we may well believe, had been trained by Caxton, Wynkyn de Worde, or Pynson. These men also showed greater skill and more enterprise, and if it cannot be shown that the best English workmen of this period equalled in craftsmanship the best of those in Paris, Rouen, Florence or Venice, their work reached a high level of excellence, and they produced books that, for beauty of typography, put them in the front rank. It is unfortunately true, however, that many of them showed a want of originality and that the trade rivalry consequent upon the growth of monopolies was responsible for much inferior work; but, on the whole, the sixteenth century is one of the best periods in the history of English printing. In the space at our disposal it is impossible to do more than mention a few of the men whose work contributed to this result.

Wynkyn de Worde's new premises were known by the sign of the Sun, and were in St Bride's parish, on the south side of Fleet Street. There he remained until his death in 1535, carrying on an extensive business as printer, bookbinder and bookseller. During these thirty-five years he printed some seven hundred books in all branches of literature, from large and stately Books of Hours and Missals to a twopenny tract on "Medecines for Horses."

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He has been justly praised for the form and regularity of his Black-Letter type, of which he used several founts, and to which he remained faithful throughout his life. They are seen at their best in folios such as the "Golden Legend," or the "Orchard of Sion." He did not begin to use roman type until 1520; but he was the first to introduce italic type into England in 1524, in Robert Wakefield's "Oratio de utilitate linguarum," in which book is also found the first attempt to cut the Hebrew characters.

A feature of De Worde's work was his partiality for ornaments, woodcut initials, and illustrations, but he had no artistic taste, using an incongruous medley of blocks without any sense of fitness to the subject they were to illustrate, and most of them obtained from abroad; while his work was often spoiled by stupid mistakes and carelessness. He used no less than sixteen varieties of devices, the best known being Caxton's old block and a tripartite device consisting of a representation of the sun, planets and stars in the upper section, Caxton's mark and initials in the centre, and below this a ribbon with his name, and as supporters a dog on one side and an archer on the other.

Richard Pynson's new premises were known as "The George in Fleet Street," and were near Chancery Lane. In 1508 he obtained the office of King's Printer and printed large numbers of proclamations, year-books and statutes, besides all the recognised law books. The picturesque founts seen in his earlier work were given up in favour of Black Letter, one fount of which is easily recognised by the absence of a capital W, in place of which he used a badly-cast

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lower-case letter. In 1508 he introduced roman type into England, and also had a well-cut fount of Greek. As a printer he was in every way superior to Wynkyn de Worde, it being a rare thing to find a carelessly printed book from his press.

Pynson died in 1530, leaving no heir, and his business was taken over by Robert Redman.

Julian Notary continued printing until 1520, among the finest examples of his work being the folio "Golden Legend," printed in 1504, and the "Chronicles of England" (1515).

Among the new men who came to the front in the sixteenth century was William Fagues, who was the first to hold the office of King's Printer. He printed about eight books, the only dated ones being those issued in 1504. He was a skilled printer, his type of the best and his presswork clean and up to date. He used an effective chain border, and his device was one of the most artistic examples of its kind—two interlaced triangles. He is not heard of after 1508, but was succeeded by Richard Fagues in 1509, who continued at work until 1530.

Another famous printer in the first half of the sixteenth century was John Rastell. A native of Coventry and trained to the law, he went to France in 1512, and there obtained a fount of small secretary type with many abbreviations, similar to that used by printers in Rouen, and learnt the art of printing in some foreign office. On his return to England, about 1514, he set up a printing house on the south side of St Paul's Churchyard, and began printing law books. His finest work was "The Great Abridgement of the Statutes," in three splendid folio volumes,

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finished in 1516. Among the other products of his press were "The Hundred Merry Tales" and "The Pastime of People." He was interested in the Drama and printed Henry Medwall's secular play of "Fulgens and Lucres," which has lately been reprinted and edited by F. S. Boas and A. W. Reid ; and also several interludes. John Rastell died in 1536. His son William also took up the trade of a printer between 1529 and 1533, and printed several of Sir Thomas More's writings. He issued an edition of Cæsar's "Commentaries," and several plays and interludes. On the accession of Elizabeth he fled abroad, and died at Louvain on 22nd August 1565.

While printing was more of a hobby than a trade with the Rastells, it was not so with Thomas Berthelet, who throughout his career remained a printer, book-seller and bookbinder. By birth a Welshman, and probably trained in the office of Richard Pynson, he began business about 1524, at the sign of "Lucretia Romana," in Fleet Street. On 15th February 1530 he was appointed King's Printer on the death of Pynson, an office which he continued to hold until the accession of Edward VI. In 1531 he printed Sir Thomas Elyot's "Boke named the Governor," in a large and beautiful gothic type, and he followed this up with a folio edition of Gower's "Confessio Amantis," in the same type. In 1533 he is found using a larger fount of this letter, noticeable as having a lower-case "h" with a bold outward curve. Dr Greg describes this as "one of the finest types ever used in England." This he used in an edition of Erasmus's "De Immensa Dei Misericordia." In all Berthelet used between thirty and forty different types. Facsimiles of these,

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and also of some thirteen borders and sixteen ornaments and cuts used by him, are given in the Bibliographical Society's "Transactions," 1907, vol. viii. pp. 187 *et seq.*

As a bookbinder Berthelet takes a high place. His work had a distinctly Italian character, but he also executed some beautifully tooled leather bindings for Henry VIII. Berthelet died in 1555, leaving his business to his nephew, Thomas Powell.

The Reformation in the Church in 1534, and the printing of the Bible in English, led Richard Grafton, a wealthy member of the Grocers' Company of London, to embark his capital in furthering this object. In conjunction with Edward Whitchurch, a printer then at Antwerp, he helped in the production of what was known as Matthew's Bible in 1537, and in a letter to Thomas Cromwell, Grafton mentioned that 1500 copies had been printed, at a cost of £500.

In 1538 Miles Coverdale, Grafton, and Whitchurch were in Paris, busy upon what came to be known as the Great Bible, but before many sheets were printed the press was seized, and the promoters fled to England. The printing material was afterwards recovered, and the printing was finished in the house "late the Grey Fryers," in Newgate Street, which Grafton had taken. On the 28th January 1543-4 Grafton and Whitchurch were granted a patent for printing church service-books. Upon the accession of Edward VI. Grafton became King's Printer, but was deprived of the office by Queen Mary. He spent the later years of his life in compiling English Chronicles, and died in 1573.

During the reign of Elizabeth English printing owed

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much to the influence of Matthew Parker, Archbishop of Canterbury. A cultured man of wide reading and a great collector of books and manuscripts, he encouraged the printers of his day to turn out well-printed and artistic books. One of these was Reyner or Reginald Wolfe, who printed for him an edition of Bishop Jewel's "Apologia" in 1562, and Matthew Paris's "Historia Major" in 1571. Wolfe began as a bookseller at the sign of the "Brazen Serpent" in St Paul's Churchyard in 1530, and in 1536 Queen Anne Boleyn obtained his freedom from the City of London. In 1542 he set up a printing press and printed the first Greek book printed in England. Wolfe used twenty-seven founts of type, eight roman, six italic, six Black Letter, three Gothic, and four Greek. He also possessed some very artistic woodcut initials. He also used six marks, the most striking being that of a group of children throwing at an apple tree. Wolfe was appointed King's Printer in Latin, Greek, and Hebrew, and was Master of the Company of Stationers in the years 1560, 1564, 1567 and 1572. He died in 1573.

Henry Bynneman of Knight Rider Street was another of the artistic printers whose work was commended by Parker. On Wolfe's death he secured much of the type and devices of that printer, and in 1574 he printed for Parker Walsingham's "Historia Brevis." Another of his patrons was Sir Christopher Hatton, whose crest and arms are found in many of his books. He was also the printer of Holinshed's "Chronicle" for Reginald Wolfe's executors. At his death in 1583 he had three printing presses at work.

But the finest printer of the sixteenth century in

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England was John Day, who also received great encouragement from Parker. Born at Dunwich in Suffolk, he is believed to have been trained as a printer by Thomas Raynold in Finsbury. In 1546 he is found in partnership with William Seres at the sign of "The Resurrection" on Snow Hill. Their work was no better than that of other printers in London. They had a fount of large Black Letter, a smaller letter of the same character, and a poor fount of roman capitals. With these they printed several theological books, their most important work before 1550 being a folio edition of the Bible in 1549. The partnership was dissolved in 1551 when Day moved to Aldersgate. During Queen Mary's reign he was imprisoned in the Tower and did not resume printing until 1557, when his name occurs in the Charter of the newly-incorporated Stationers' Company. In 1559 he produced W. Cunningham's "*Cosmographically Glasse.*" The typography of this book was an advance upon anything seen in England before that time. The type used was a large italic letter, and several well-executed woodcut initials added to the artistic appearance of the book which was further increased by a fine portrait of the author. In 1566 John Day printed for Archbishop Parker "*A Testimonie of Antiquitie,*" for which he specially cut and cast a fount of Anglo-Saxon type, the first used in England. A year or two later he printed, at Lambeth Palace, Parker's "*De Antiquitate Britannicæ Ecclesiæ.*" Among literature of a different kind it may be noted that he printed Vandernoot's "*Theatre for Wordlings,*" in which appeared verses by Edmund Spenser, and "*The Tragedy of Gorbuduc*" by Thomas Norton. John

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Day also possessed some very fine initials and his Great Primer Italic was unsurpassed. He died at Walton in Essex on the 23rd July 1584.

Other London printers noted for the excellence of their work were Richard Tottell (1553-93), Henry Denham (1564-89), Thomas Vantrollier (1566-88), Christopher Barker (1569-99), and Richard Field, a fellow townsman with Shakespeare and printer of his first work "*Venus and Adonis*."

Outside London printing was carried on in nine towns during the sixteenth century. The second Oxford Press began in 1517 when John Scolar printed W. Burley's "*Super libros posteriorum Aristotelis*" with type obtained from Wynkyn de Worde. He followed this with "*Questiones super libros ethicorum Aristotelis*" in 1518, in which appeared his device embodying the arms of the University. During the two years he was at work he printed eight books. In 1519 another printer, Charles Kyrforth, printed a "*Compotus manualis ad usum Oxoniensis*," a pamphlet of a few leaves with an elaborate woodcut on the title-page. He then disappeared and Oxford was again without a printer until 1585 when Joseph Barnes, with the help of the University, who lent him £100, started the third Oxford Press. His first book was John Case's "*Speculum moralium quaestionum in universam ethicen Aristotelis*." More than three hundred books, many of them in Greek and Latin, testify to his activities as a printer.

At Cambridge the first printing press was set up in 1521 by John Siberch, who probably came from the neighbourhood of Cologne. His first book was the Oration of Dr Henry Bullock. The type in which it

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was printed bears a strong resemblance to some of Pynson's, but where he obtained it is not known. In all nine books came from his press during the years 1521-2. Siberch was also a bookbinder and used a signed roll and two decorative panel stamps.

A second press was set up in St Albans in 1534 by John Herford, who at the request of Robert Catton, the Abbot, printed John Lydgate's "Life of St Alban." This press remained at work until the suppression of the Abbey in 1539 when Herford moved to London.

Printing began at York in 1509, when a printer named Hugo Goes printed the York "Directorum Sacerdotum." Two other books, an "Accidence" and a "Donatus," both without date, are ascribed to his press. In 1513 a second printer set up in this city and printed an edition of the "Festum Visitationis Beate Marie Virginis." Ursyn Mylner, the printer, was born in 1481, and at the time of printing this book he was settled in the Churchyard of St Peter's. He took up his freedom in 1515-16, and in the latter year printed an edition of Whitinton's "Grammar." This contained his device, consisting of a shield hanging from a tree supported by a bear and an ass. The shield shows on one half a windmill and on the other a sun. A work by a third York printer, John Warwick, a Latin Accidence printed in 1532, has recently been acquired by the British Museum.

Two books were printed at Tavistock in Devon between the years 1525 and 1534. One of them, an edition of the "De consolatione philosophiae" of Boethius, is said to have been printed by Dan Thomas Rychard, monk of the monastery at Tavistock. The

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second was the "Statutes of the Stannery" which bears no printer's name.

John Scolar, who had left Oxford in 1518, is found at Abingdon in 1528, where he printed a Breviary in quarto.

In 1547 presses were established at Ipswich, Worcester, and Canterbury. The printer at Ipswich was Anthony Scoloker, who printed seven books there in the years 1547-8, mostly theological works. Scoloker afterwards moved to London and was for some time in partnership with William Seres. He was succeeded by John Oswen, who issued ten books during the latter half of 1548. These again were chiefly octavos of a theological character. Oswen then left Ipswich and settled in Worcester. There he printed in 1549 two editions of the Book of Common Prayer, one in folio and the other in quarto. In 1550 he produced a quarto New Testament, but the bulk of his work down to 1553, when he is last heard of, were such works as Veron's "Godly Sayings of Ancient Fathers" (1550) and Hooper's "Homily in Time of Pestilence" (1553).

The printer at Canterbury was John Mychell, a native of Kent, who began as a bookbinder in 1530. Some time about 1540 he came to London and printed a few small things at the Long Shop in the Poultry. Returning to Canterbury in 1549, he set up a press there, at which he printed some eleven books between that date and 1556, after which no more is heard of him.

One more provincial press remains to be mentioned, namely that at Norwich, which was set up by Anthony de Solemne or Solempne in 1566; but as most of its

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issues were printed in Dutch it hardly comes within our scheme.

The opening years of the seventeenth century saw the printing of the Authorised Version of the Bible in 1611. This was printed by Robert Barker, who had succeeded his father, Christopher, as King's Printer. It was a handsome folio, set up with newly-cast Black-Letter type, varied with roman and italic, and had an engraved title-page by Cornelio Boel, an Antwerp artist.

Robert Barker was early in pecuniary difficulties and was financed by Bonham Norton, John Norton, and John Bill, three of the largest capitalists in the Company. Trouble subsequently arose between the parties, the history of which is fully set out in the King's Printing House under the Stuarts (Library, Second Series, vol. ii. pp. 353-375), and explains the numerous varieties of imprints found in books printed at the King's Printing House at this time, and the sequel to which was that Robert Barker died in a debtor's prison and Bonham Norton was disgraced and thrown into prison for libelling the Lord Chancellor.

John Norton held the patent for printing Greek, Latin, and Hebrew books. He is best remembered as publisher of the Eton "*Chrysostom*," for which Sir Henry Saville provided the Greek type and the rest of the material was supplied by Melchisidec Bradwood, who took presses and workmen down to Eton for the purpose.

John Bill was a native of Shropshire and was apprenticed on the 25th July 1592 to John Norton, by whom he was recommended to Sir Thomas Bodley.

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He travelled abroad for many years, buying books for the Bodleian Library. He died in 1630.

By an order of the Company of Stationers made on the 9th May 1615 only nineteen printers, exclusive of the patentees, and four typefounders were allowed in London. As time went on more and more of the type used by English printers was of Dutch origin. One of the best printers of the time was William Stansby, who in 1609 printed an edition of Green's "Pandosto." He possessed a large stock of varied letter, while his initials and ornaments were of an artistic character and his press work was uniformly good. Among the important books he printed were, Ben Jonson's Works, in folio, 1616; Selden's "Mare Clausum," 1635; and the second and subsequent editions of Hooker's "Ecclesiastical Politie."

Another notable press in the early years of this century was that of Humphry Lownes at the "Star" on Bread Street Hill. Two editions of the works of Du Bartas, 1605-6 and 1608; several of the writings of Bishop Hall and William Crashaw; an edition in folio of Spenser's "Faerie Queen"; Drayton's "Polyolbion," 1613; and the musical works of William Byrd, 1610, are but a fraction of his output.

The first folio of Shakespeare's Works (1623) came from the press of Isaac Jaggard. It illustrates perhaps better than any other book of its time the low ebb to which the art of printing had fallen in this country. The type used throughout for the text was small and badly worn, and the compositor's and pressman's work was very carelessly done. The best type used throughout the book was the large italic seen in the Dedication.

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Renewed activities on the part of the episcopal authorities to suppress Puritanism began to show itself at the beginning of the century, and took the old form of a rigid censorship of the press. By the Star Chamber decree of 1637 the number of printers in London was limited to twenty, and none were allowed more than two presses unless they were Wardens of the Company of Stationers. No joiner or carpenter was to make a printing-press without notice to the Company, and all books of a general (read) theological character were to be licensed by the Archbishop of Canterbury, the Bishop of London or the Chancellors or Vice-Chancellors of the two Universities.

The Civil War which followed made the decree a dead letter. For the next twenty years the presses of London were chiefly employed in turning out news-sheets and political propaganda, printed with any old type and blocks that the offices contained. A few notable books, such as Brian Walton's Polyglot Bible in six volumes, retrieved the art from complete decay. When the King fled to the north of England he sent to London for a printer, and John Legatt, the son-in-law of the King's Printer, Robert Barker, was sent to Newcastle in answer to this summons, and several pamphlets and proclamations bearing the imprint "Newcastle-on-Tyne" are known. When in 1642 King Charles entered York, he again sent to London for a printer and, in consequence, Christopher Barker III., grandson of the King's Printer, took presses, letter, and workmen to York, and some thirty-nine pieces with that imprint are known. In 1643 the press was at Shrewsbury and Bristol, and there was

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also a press at Exeter in 1645 at which was printed Thomas Fuller's "Good Thoughts in Bad Times."

The Restoration saw no improvement in printing ; on the contrary, it sank even lower as a consequence of the outbreak of the plague in the autumn of 1665 and the Great Fire of London in 1666.

During the later years of the century the most important men in the trade were James Fletcher, Thos. Roycroft, Thomas Newcombe, and E. Horton. From the press of the last-named printer came editions of Cicero and Herodotus in folio, printed from type cast in James Glover's foundry in Angel Alley, Aldersgate Street.

Turning now to the two universities, printing was mainly in the hands of private printers in Oxford until 1669. John Barnes had been succeeded in 1617 by John Lichfield, and other printers were William Wrench (1617), James Short (1618-24), William Turner (1624-40), Leonard Lichfield (1635-1657), and Henry Hall (1642-79?). But to quote the words of Mr F. Madan, "there were no ideals, no guiding policy, no high endeavour." The types and ornaments in use were old and out of date. In 1651 the University purchased a quantity of London-made Hebrew letters. In 1656 they purchased more Hebrew type, a fount of Arabic as well as a fount of Saxon letters, obtained from the London letter-founder Nicholas Nicols. Again in 1667 Dr John Fell, Dean of Christchurch and Vice-Chancellor, helped to provide founts of Armenian, Coptic, Samaritan, and Slavonic types. On the 9th July the Sheldonian Theatre was opened and part of it applied to the uses of a printing office, extra presses being bought for the

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university printers, and type, punches and matrices obtained from Holland. In 1672 Beveridge's work on the Canons in Greek with a Latin translation, a massive folio, appeared, to be followed in 1674 by Anthony Wood's "*Historia et Antiquitates Universitatis Oxoniensis*," with numerous engravings and ornaments, and from that time to the end of the century the press at Oxford continued to turn out excellent work.

If Cambridge had a less exciting time than Oxford during the seventeenth century, the printers turned out some fine books before the Revolution: John Legatt or Legate and Cantrell Legge shared the work of the University, the former dying in 1620 and the latter in 1629. In 1632 appeared the first Cambridge Greek New Testament printed with the type previously used in printing the Eton "*Chrysostom*."

Thomas and John Buck printed numerous copies of the Bible and Book of Common Prayer besides large numbers of classical works, and they were joined in 1632 by Roger Daniel, a printer in London, whose patent was cancelled in 1650. The most important printer during the Commonwealth period was John Field, who printed many editions of the Bible in all sizes, all of which were noted for the badness of the printing and their excessive price. In 1655 Field built a new printing office in Silver Street, Cambridge, which continued to be the University printing office until 1827. Field was followed in 1669 by John Hayes, who held the office of Printer to the University until his death in 1705.

In 1693 the restriction on provincial printing which had existed since the days of Elizabeth was allowed

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to lapse, and printing presses were set up in various towns before the end of the century. In 1695 William Bonny began to print at Bristol. At Exeter Samuel Darker established a second press in 1698 and was joined by Samuel Farley in 1699. Plymouth is said to have had a press in 1696, but nothing printed there has been found; while in or before the same year Thomas Jones set up a press at Shrewsbury.

At the beginning of the eighteenth century type-founding in England was practically at a standstill, and the printers had to rely almost entirely on what was known as Dutch letter. James, the only English founder whose business was flourishing, had stocked his foundry with Dutch matrices, and there was more Dutch type in use in England between the years 1700 and 1720 than ever before. The reason was that it was made of better metal and the punches were more carefully finished, but at its best it was a poor substitute for the roman and italic seen in the books printed in the sixteenth century by John Day, Henry Denham, or Thomas Vantrollier, and their contemporaries. To this must be added that the printer's work was almost equally bad. But about 1720 a brighter era opened. This was brought about by one man, William Caslon, the type-founder. Born at Cradley in Shropshire, Caslon began as an engraver, but soon turned his attention to cutting type punches, and the beauty and regularity of his roman and italic types worked a revolution in book production. The fame of it spread rapidly, and before long all the best and most important books in England were printed in Caslon's letter. In 1734 he issued his first

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specimen sheet which contains thirty-eight founts, and moved to larger premises in Chiswell Street.

Another important experiment was made in 1727 by a goldsmith named William Ged for simplifying printing by means of casting whole pages at once. This art, known as stereotyping, which is to-day in universal use, was laughed at by the printers in Ged's day, and, after several attempts, he retired disheartened and ruined. An edition of "Sallust" and a few theological books printed at Newcastle are all that remain of this first attempt at stereotyping.

Meanwhile a more formidable rival to Caslon came to the front. John Baskerville was born in 1706 at Wolverley, a village in Worcestershire. He afterwards became a writing master, and in 1750, no doubt inspired by Caslon's example, he set up a letter-foundry in Birmingham, and for some years experts were divided in opinion as to the superiority of Baskerville's letter over that of Caslon's. There was in reality little to choose between them. Baskerville's italic was declared to be finer than his rival's; but its very fineness led to much adverse criticism, as being injurious to the eyesight.

The University of Oxford in 1758 employed Baskerville to cut a fount of Greek type; but it is generally admitted to have been a failure. The punches of this type are still at Oxford.

Baskerville's ambition was to print a folio Bible and he applied for and obtained the post of University printer at Cambridge, where in 1760 he issued a Prayer Book, and in 1763 a Bible in imperial folio. Both books were good examples of his work as a printer, the excellence of which lay much in its simplicity.

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Nothing was allowed to detract from the beauty of the type. The title-pages were not overcrowded. Ornaments and tail-pieces were used sparingly and the lines were spaced out with the best effect.

In addition to the above-mentioned works the chief productions of the Baskerville press were an edition of the Works of Addison in four volumes (1761), the Works of Congreve (1761), Milton's Poems (1758), and a quarto edition of Latin authors in 1772-3. Baskerville died on 8th January 1775, and his type was sold in 1779 to the Société Litteraire-typographique of France.

Between the years 1763 and 1800 the improvement in printing due to Caslon and Baskerville made rapid strides, until by the end of the century the work of English printers would bear comparison with that of any foreign printers. The founders aimed at the production of good models in type and ornaments and the printers emulated each other in the production of artistic books. Of William Bowyer's work a lasting record remains in the pages of Nichol's "Literary Anecdotes." Thomas Bensley of Bolt Court was another. Macklin's Bible was one of the finest books ever printed, the two-line English being supplied from the foundries of Joseph Jackson and Vincent Figgins. But what was perhaps the most beautiful book printed at that time was the Boydell "Shakespeare," the type for which was cut by William Martin of Birmingham on the model of Baskerville. The work was printed at the press of William Bulmer, who, in an edition of Goldsmith's Poems issued in 1799, declared that no pains had been spared to make it a perfect specimen of the arts of type and block printing.

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Since those days the art of printing in England has never looked back.

During the eighteenth century printing became general throughout England, and most of the provincial printers began by issuing a newspaper. There has been much controversy as to which was the earliest of these ; but it seems to be now generally admitted that the "Norwich Post," printed by Francis Burgess, the first number of which appeared in September 1701, was the first. The next in order of time was Bonny's "Bristol Post-Boy." In Cirencester printing began in 1718 when Thomas Hinton established a press and brought out the "Cirencester Post." In Canterbury James Abree revived the art of printing in 1717 and published the "Kentish Post or Canterbury News-Letter."

In the north the most important presses were those of York and Newcastle. The first York newspaper was the "York Mercury," printed and published by Grace White in February 17¹⁸₁₉. In Newcastle John White, the son of the York printer, set up a press in 1708, and began to issue the Newcastle "Courant" in 1711.

Amongst other towns in the north where presses were at work early in the century were Nottingham, 1710 ; Chester, 1711 ; Liverpool, 1712 ; Birmingham, 1716 ; and Manchester, 1719.

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SCOTLAND.—The history of printing in Scotland begins in 1507, when on the 15th of September King James IV. granted permission to Walter Chepman and Andrew Myllar, burgesses of Edinburgh, to import a printing press and letter, and gave them licence to print law books and other works. Special mention was made of "mess bukes, efter our awin scottis use . . . as is now gathered be ane Richard fadir in God and our trusty consalour William biscope of Aberdene."

Chepman and Myllar were both in royal favour, the former being a merchant, while Myllar had for some years carried on the business of a bookseller. Two books prove that Andrew Myllar was in France learning the art of printing in 1505. One is an edition of the "*Liber Equivocorum*," with Myllar's name in the colophon, and again his device was found in a copy of the "*Expositio sequentiarum*," dated 1506. These books are believed to have been printed in Rouen by P. Violette, and not by L. Hostingue, as surmised by M. Claudin.

Chepman and Myllar set up their press in the Southgate (now the Cowgate), Edinburgh, and in April 1508 their first publication appeared. This was "*The Maying and Desport of Chaucer*," and it was followed at intervals by a series of Scottish poems.

Their most important undertaking was the "*Aberdeen Breviary*," an octavo in two volumes, printed with various founts of Black Letter, but in a very slovenly way. The work was issued in 1510, and, as it only contained Chepman's name in the colophon, the supposition is that Myllar had died before its completion, and nothing more appeared from this press. Chepman's device was a copy of that of

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P. Pigouchet, the printer of Paris, while Myllar's was a play upon his own name, a miller with sacks on his back going up into a mill (M'Kerrow, 22 and 29).

The second press in Scotland was that of Thomas Davidson, who, in 1540, printed the "Chronicles of Scotland," and in 1541-42 the "New Actis and Constitutionis of Parliament." His press was also very short-lived, and the next printer found in Scotland was John Scot or Skot. In 1539 he rented two rooms in the Cowgate in Edinburgh. From there he moved first to Dundee, and then to St Andrews, where he is believed to have printed some tracts, now lost. The first authentic evidence of his work as a printer is discovered in 1552, when he printed, at St Andrews, the "Catechism of Archbishop Hamilton." Between that date and the year 1562 he printed numerous works of a theological character, one of which, Ninian Winyet's "Last Blast of the Trumpet," led to the confiscation of his press and letters by the Assembly; but in 1567 he was again at work, and is last heard of in 1571. He obtained most of his material from England.

A much more important man was Robert Lekpreuik, who began printing in Edinburgh in 1561, his first dated book being a small Black Letter octavo, "The Confessione of the Fayght." He continued to print in Edinburgh till 1571, when he removed to Stirling, and afterwards to St Andrews, where he remained until April 1573. He then ventured to return to Edinburgh, but soon afterwards his press was seized and he was thrown into prison. He was, however, printing again in 1581, in which year several pamphlets

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are found with his imprint, after which nothing more is heard of him.

Another of John Skot's contemporaries was Thomas Bassandyne, who is first heard of in 1568 as printer of a book called "The Fall of the Roman Kirk." On the 7th March 1574 he entered into partnership with Alexander Arbuthnot to print an edition of the Bible. Bassandyne's name appears only in the colophon to the New Testament, which was issued in 1576. He died in October 1577. The work was thus left to Arbuthnot to finish and appeared in 1579, but was so badly and carelessly printed that the General Assembly would have nothing more to do with him. Arbuthnot died on September the 1st, 1585.

Between 1574 and 1580 a printer named John Ross was at work for Henry Charteris the bookseller. Among his work was a rare poem entitled "The Seuin Seages, Translatit out of prois in Scottis meter be Johane Rolland in Dalkeith." Ross died in 1580, and Henry Charteris took over his business. Among many theological tracts he was the printer of several editions of the "Works" of David Lindsay. He died on the 9th August 1599.

Meanwhile the General Assembly, in 1580, had invited the Huguenot printer, Thomas Vautrollier, then at work in London, to visit Edinburgh. Nothing came of this ; but in 1584 Vautrollier fled to Scotland to avoid imprisonment, and then set up a press ; evidently he was not satisfied with the result and returned to London in 1586.

Another English printer, who had made England too hot to hold him and had fled to Scotland, was Robert Waldegrave, who, on March the 13th, 15⁸⁹,
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received a licence from the Privy Council of Scotland to print the "Confession of Faith," and this appeared with his imprint in 1590. On October the 9th, 1590, he was appointed King's Printer for Scotland, and from that time until 1603 his press was busy, more than one hundred books being known with his Edinburgh imprint.

Throughout the seventeenth century printing in Scotland continued to flourish. In Edinburgh, in 1602, Thomas Finlason bought up most, if not all, of the printing privileges then existing, as well as the plant and stock-in-trade of the holders, and in 1606 the Privy Council granted him a licence to exercise these privileges for twenty-five years. In 1612 he was appointed King's Printer in succession to Henry Charteris. Many of the ornaments formerly used by Waldegrave and other Scottish printers are to be found in his books. His work was chiefly of an official character. He died in 1628, and was succeeded by his second son, Walter Finlason.

On the cessation of R. Charteris' press in 1610, another Edinburgh bookseller, Andro Hart, set up as a printer, and issued in that year a folio Bible. His work as a printer bears favourable comparison with that of any of his predecessors, and the literary character of his publications makes the study of his press extremely interesting. Andro Hart died in December 1621, and the business was carried on by his widow and children until 1639, when the press was taken over by James Bryson and continued until 1642.

John Wreittoun began printing in Edinburgh about 1624, and between that date and 1636 some sixty books have been traced bearing his imprint.

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During the latter half of the century the chief printing in Edinburgh was carried on by two London men, Robert Young and Evan Tyler. On April the 12th, 1632, Young had been appointed King's Printer in Scotland, in succession to T. Finlason, and was joined by Evan Tyler in 1637. In 1642 Young's name dropped out of the imprints, though he still nominally shared the patent until his death in 1643. Tyler, in 1647, sold the business to the Company of Stationers in London. Apparently, however, he was left in charge of it until 1651, when he moved to Leith, and in the following year returned to London until the Restoration, when he returned to Edinburgh and printed there until 1672. From 1676 to the end of the century the most notable firm in Edinburgh were the heirs and successors of Andrew Anderson, who were printers to the town and college, as well as King's Printers.

In 1638 George Anderson set up the first press in Glasgow, perhaps at the suggestion of the Town Council and the University. He died in 1647, and his heirs continued the business for a time, and then removed to Edinburgh. In 1657 Andrew Anderson, son of George, came from Edinburgh and set up at Glasgow. In 1661 Robert Sanders, who had a book-seller's shop, set up a printing press and printed New Testaments and other works. In 1684 he purchased George Swintoun's share in the King's Printing House, and in the same year was forbidden to pirate Forbes' "Aberdeen Almanacs." He died on July the 12th, 1694, and was succeeded by his son Robert.

The first printer in Aberdeen was Edward Raban, an Englishman of German descent, who had learnt

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the art of printing at Leyden. After a brief stay at Edinburgh (1620) and St Andrews (1620-22), he settled at Aberdeen. Upwards of 150 books are known to have issued from his press before 1650, many of them being printed for David Melvill the bookseller. Raban was succeeded by James Brown, who died in 1661, when the business passed into the hands of John Forbes, who issued an almanac.

During the eighteenth century the principal printer in Aberdeen was James Nicol (1710-32), who had married the daughter of John Forbes, the younger. He was in turn succeeded by John Chalmers.

Amongst the most important presses in Edinburgh in the eighteenth century that of Robert Freebairn claims the first place. A son of David Freebairn, Bishop of Edinburgh, he purchased the printing materials of John Spottiswood in 1706. In 1711 he was appointed Queen's Printer, and at once made over to John Baskett, the London printer, one-third share, and to James Watson another share. He died about 1737, his assigns continuing to print until 1752. John Baskett did nothing until 1725, when he set up a printing house in Edinburgh, and printed several editions of the Bible. His patent was disputed by John Watson, but settled in Baskett's favour.

Another noted printer was John Ruddiman, who in 1728 was joined with James Donaldson as printer to the University of Edinburgh. His printing house and materials passed to John Robertson.

The most important press in Scotland during the eighteenth century was that of Robert and Andrew Foulis, in Glasgow. Robert Foulis began printing in 1742 with type probably supplied by Robert Urie, who

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had a year or two earlier printed books for him. He was appointed printer to the University of Glasgow, and produced the first book in Greek type that had ever come from a Glasgow press. In 1744 Dr Andrew Wilson, whose foundry had become noted, began to supply Robert Foulis with type. In the same year Andrew Foulis joined his brother, and the press at once became famous for the beauty of its productions, notably editions of the classics. The edition of Horace earned the title of "the immaculate"; the small folio edition of "Callimachus" took the silver medal offered in Edinburgh for the finest book of not fewer than ten sheets, and the "Homer" was even better. Several editions of English authors were produced in the same way. In 1775 Andrew Foulis died suddenly, Robert dying in the following year. The Foulis press was carried on until the end of the century by the younger Andrew.

The good work done at Glasgow was followed up in Perth, where from 1775 until well into the next century Robert Morison and his sons turned out many beautiful books in all classes of literature.

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IRELAND.—The first press set up in Ireland was that of Humphrey Powell of London, to whom King

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Edward VI. granted a warrant, on the 18th July 1550, for £20 for that purpose. He settled in Dublin in the Great Tower by the Crane, and printed, in 1551, the "Prayer Book" of Edward VI. In 1571 the first fount of Irish type was given by Queen Elizabeth to the Treasurer of St Patrick's, to print the "Catechism," which came from the press of William Kearney, who was in turn succeeded by John Frankton, who, in 1604, was appointed King's Printer for life, with a fee of £8. In or about 1619 he sold his rights to three members of the Stationers' Company of London, Felix Kyngston, Matthew Lownes, and Bartholomew Downes; but this attempt to monopolise Irish printing was not a success, and in 1641 William Bladen acquired all the interest of the Company in their Irish stock and patent.

Among the later men of the seventeenth century were John Crook, sen. and jun., Benj. Tooke, Samuel Helsham, Joseph Ray, John Brocas, S. Powell, and J. Brent.

A press was established in Kilkenny in 1645 by T. Bourke. None of the books printed there bore a printer's name, but T. Bourke's name is found on a sheet entitled "Declaration by the Confederate Catholics' Council, 1648."

In 1649 an edition of the "Eikon Basilike" was printed at Cork by Peter de Pienne, who later moved to Waterford, where he printed until 1654.

About 1698 Patrick Neill established a press in Belfast, and continued there until 1702, most of his output being works on divinity.

During the eighteenth century there were several presses in Dublin, largely employed in the production of pirated editions of the works of English authors.

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George Grierson began to print in 1715. Another important printer during the first half of the century was Aaron Rhames, who printed the first complete English Bible and the earliest heraldic work printed in Ireland.

Many presses were established in other parts of Ireland during the eighteenth century, one of the earliest being at Limerick, where Samuel Terry and a partner set up in 1722. Altogether some seventeen printers were at work there during the century. In Armagh, William Dickie began to print about 1740. In Drogheda, although a press is believed to have been at work in 1671, there is no authentic record of a press there before 1772.

In Monaghan William Wilson began work in 1770, and made a special feature of song-books, little octavos of eight pages, with a woodcut on the front page.

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SCANDINAVIA

BY LAURITZ NIELSEN

DENMARK.—The art of printing reached the Scandinavian countries at different times, and came first to Denmark in the year 1482. The printer Johann Snell, who had been working at Lübeck since 1480, went to Denmark in response to a call from the bishop of the diocesan town of Odense, Karl Rønnow, who wanted to supply his diocese with printed ritual books. Bringing with him from Lübeck his own printing material, Snell set up his press in St Hans cloister at Odense, and during the year 1482 he printed a “*Breviarium Ottoniense*,” the first book printed in Denmark. No complete copy of this work is extant, the only one known is a defective copy without beginning or end. This copy is in the Royal Library at Copenhagen, and has lately been identified as the work of Snell by means of comparative type investigations. Whilst at Odense Snell also printed, as a publication of his own, a little book in Latin containing a description of the Turkish siege of Rhodes, which had taken place a few years before. After the publication of these two works he returned to Lübeck at the end of the year 1482.

The next printer was Stephan Arndes of Hamburg. Like Snell he was summoned to Denmark by the clergy, who wanted him to print a Missal for Slesvig diocese. In 1486 he printed at Slesvig the “*Missale*

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Slesvicense," one of the most beautiful books ever produced in Denmark. At his own expense he printed two small Latin school-books. Probably he left Denmark at the end of the year 1486.

The most important of the earlier printers in Denmark is Gotfred af Ghemen. A Dutchman by birth, he emigrated about 1489 from the little Dutch town of Gouda, where he had been managing a press for several years, and settled in the capital of Denmark. Here he took out a licence as a printer and established a permanent press. The first book of this press, so far as is known, and consequently the oldest book extant printed in Copenhagen, is a little Latin grammar, a "Donat" about 1489. His best-known work is "Den danske Rimkrønike" (The Danish rhymed Chronicle), issued in 1495, the first book printed in the Danish language, and the only one printed in the fifteenth century. Gotfred af Ghemen worked at Copenhagen till his death in 1510, and printed several popular books in Danish, which have been of great use in the later study of old Danish language and literature.

The three printers mentioned were the only ones who worked in Denmark in the fifteenth century, and only nine known incunabula were issued by them. At the same time, some few books, most of them of a liturgical nature, were printed abroad, chiefly at Lübeck, for use in Denmark.

During the sixteenth century the art of printing was greatly extended in Denmark, the introduction of the Lutheran Reformation giving rise to the establishment of several presses, mainly in the Danish country towns. In the earlier half of the century, immigrant

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printers travelled from place to place, settling in towns where work was to be found. A great majority came from North Germany. For a long period Danish production of books was deeply marked by German influence, and a great many Danish books were printed in Germany. Among the German printers in Denmark in the first part of the sixteenth century, Matthæus Brandis of Lübeck is of special note. He worked at several Danish country towns and at Copenhagen, where he printed the beautiful "*Missale Hafniense*," 1510. After his death his printing press was taken over by the canon Poul Ræff, the first Dane to take up book-printing. During the great struggle between Catholicism and Protestantism, Ræff worked entirely for Catholicism by printing ritual books as well as by publishing Catholic propagandist literature. His principal work is a mass-book for Trondhjem diocese in Norway, "*Missale Nidrosiense*," printed at Copenhagen in 1519 on the initiative of Archbishop Erik Valkendorf of Trondhjem. Later he worked at the Danish country towns Nyborg and Aarhus. His last book was issued in 1533.

In the Reformation camp the printer Hans Vingaard took up a position similar to that of Poul Ræff in the Catholic camp. Hans Vingaard, who was born at Stuttgart, arrived in Denmark in 1528, establishing himself at the town of Viborg in Jutland, at that time a centre of the Reformation in Denmark. Later he moved to Copenhagen, where he remained a printer until his death in 1559. His work was of great importance for the Reformation; for instance, he printed the "*Danish Church Ordinance*," a psalm-book,

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and many works of the Reformation author Peder Palladius. Like Gotfred af Ghemen he printed and sold many popular books in Danish, including an edition of the "Rhyme Cronicle" and Henrik Smith's medical books. For years he was printer to the University at Copenhagen, and printed the first catalogue of lectures in 1537.

The chief town, Malmö, in the now Swedish province of Skåne, was then a Danish country town, and was a chief seat of the Reformation. A printer to the newly founded evangelical school for ministers at Malmö was wanted, and so Olof Ulriksson was sent for (about 1527). Born in Sweden, he began his career as a priest, and later on he became printer in his native land. He remained at Malmö until the year 1556, and printed the oldest Danish edition of Luther's "Catechism" (1537) now extant. A few years after Ulriksson had settled at Malmö this town had another press. The well-known Danish Reformation author, Christiern Pedersen—notable for having saved from destruction Saxo Grammaticus' "History of Denmark," in Latin, by editing it at Paris in 1514—established at Malmö a press, which, however, only lasted till 1535. It was managed by the Dutch printer, Johan Hoochstraten, and that is the reason why we find his name on books which have come through the press of Chr. Pedersen. These were, besides a psalm-book and several religious and political tracts, some of Chr. Pedersen's own works, including his medical books. This press was the first one in Denmark to use italic types.

Among the other printers of the earlier half of the sixteenth century one must also be mentioned, namely,

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Hans Barth, who worked in 1534-40 at the little town of Roskilde, near Copenhagen. Like most of the contemporary printers in Denmark, he was of German birth. The first book in Denmark printed in roman types was issued by his press in 1538. In 1540 Barth printed an Icelandic translation of the New Testament, the first book printed in the Icelandic language.

The greatest literary work produced during the time of the Reformation is the Bible of King Christian III. The local printers being unequal to the considerable task, the esteemed printer, Ludwig Dietz of Rostock, was called to Copenhagen to manage the printing, which was completed in 1550. This folio work is beautifully printed and sumptuously decorated with many woodcut illustrations; it is, however, a slavish imitation of a Low-German Bible previously printed by Dietz.

About the middle of the sixteenth century a new era in printing commenced. At that time the Renaissance began to influence the make-up of books, and the latter half of the century is one of the most fertile periods in the history of Danish book production. The leadership of this development was taken by Lorentz Benedicht, one of Denmark's most prominent printers. Probably he immigrated from Germany. From about 1560 till 1601 he managed a flourishing business at Copenhagen and printed a *Passionale* and a *Graduale*, both of them beautiful books, appearing in 1573. His principal work is a military-scientific work of the German Joachim Arentsehe, printed by order of King Frederik II., only one copy being produced. Benedicht was the first Danish printer to use German Fraktur-types as well as typographical

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material for musical notes. In addition, he was an eminent xylographer, who himself cut several of the many beautiful woodcuts decorating his books. A contemporary printer was Mads Vingaard, who also, with great ability, worked at Copenhagen from the beginning of the 'sixties till the year 1600. His principal works are an illustrated folio edition of Luther's "Postil" (1577), and Frederik II.'s Danish Bible (1589), a gigantic folio with a great many illustrations. Further is to be noted the German Hans Stockelmann, who was called to Denmark in 1574 to occupy the newly established post as printer to the University, and his companion, Andreas Gutterwitz, who later on, upon the death of Stockelmann, moved the press to Sweden. The principal output of the press of Stockelmann and Gutterwitz at Copenhagen were Anders Sørensen Vedel's Danish translation of Saxo's History of Denmark (1575), and the first Danish edition of Niels Hemmingsen's "Postil" (1576).

After the year 1556 Copenhagen was, for a long time, practically the only town in Denmark where books were printed. One single exception is the now German town of Slesvig, where permanent presses were almost constantly to be found. In addition, two private presses worked outside Copenhagen for a short time during the latter part of the sixteenth century, one of them belonging to the famous astronomer, Tycho Brahe. At his castle, Uranienborg, on the little island Hveen, in the Sound, between Sweden and Denmark, he lived in a grander style than other men of science, a style at that time probably unequalled in Europe. For the purpose of producing

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his books he established a paper-mill, a press, and a bookbindery. The Uranienborg press was active from 1584 until Tycho Brahe was exiled in the year 1597, when he took the press abroad with him. The books issued at Uranienborg are splendidly printed, and profusely decorated with illustrations produced by artists and engravers sent for from abroad by Tycho Brahe. The other private press belonged to the Danish historian, Anders Sørensen Vedel, and was to be found at the little town of Ribe in Jutland. It remained active for a few years only, from 1591 to 1593; from this press was issued the famous collection of old Danish popular ditties published by Vedel.

In the seventeenth century a long-lasting period of retrogression in the Danish art of printing commenced. Taste decayed, which resulted in badly printed books, overloaded with ornaments. Furthermore, the printers had to struggle with great practical difficulties, particularly the censorship and the prevailing piracy. Under these circumstances, only the few privileged printers, such as University and Court printers, were able to spend sufficient time and money on their books. Until the very middle of the eighteenth century the quality of Danish printing was very indifferent.

At the beginning of the seventeenth century the most remarkable of Danish printers was Henrik Waldkirch, from 1598 till his death in 1629 managing a press which, compared with other presses of that time, was a fairly considerable business. He was the first printer in Denmark to use Hebrew types. The capable printer Melchior Martzan, who began the

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publication of the first newspaper in Denmark, flourished from 1626 to 1654. His newspaper was, however, printed in German, the first one printed in Danish being "*Den danske Mercurius*" (The Danish Mercury), which was not published until 1666. It was printed by Jørgen Gøde, who succeeded his brother Henrik Gøde in the office of University printer. Henrik Gøde was also the first manager of the Royal Press, which was established after the introduction of Absolutism in 1660. A prominent printer was Joachim Schmetgen, who has printed several extensive and beautiful books, including Holger Jacobæus' "*Museum Regium*" (1696), and Torfæus' "*Historia rerum Norvegicarum*" (1711), a gigantic work in four folio volumes, up to that time the largest work which had appeared in Denmark. The University printer, Joachim Wielandt, must also be mentioned. He worked from 1719 till 1730, and was well known on account of his style of work as a publisher of newspapers and periodicals. All the printers mentioned worked at Copenhagen. In the year 1728 a great fire devastated the town, and of the ten presses then existing six were entirely destroyed.

Upon the death of Wielandt, the family of Höpfner succeeded to the office of University printer and manager of the Royal Press, and for three generations remained in charge of these lucrative positions. On the other hand, the newspaper privilege was acquired by the German, Ernst Heinrich Berling, who in 1732 settled at Copenhagen as a printer and a publisher. In 1749 he began the publication of "*Københavnske danske Posttidender*" (Copenhagen Danish Post-

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Times), precursor of the still existing "Berlingske Tidende," now one of the leading journals of Denmark. Issued by the Berlinger press, which for more than one and a half centuries had been in possession of the Berling family, were several well-known books, including Thurah's "Danske Vitruvius" (1746-49) and "Hafnia Hodierna" (1748), which were among the finest books printed in Denmark at that time.

During the seventeenth and the beginning of the eighteenth century, only a few presses were to be found at the Danish country towns. Noticeable amongst them is Jørgen Hantsch's press, which was attached to the Sorø Academy, founded by Christian IV. Hantsch published, in 1655, the first Danish type specimen book, and printed, in 1658, a fine folio edition of Seneca's works in a Danish translation, published by the noblewoman Birgitte Thott. In response to a call from the Swedish King, Carl Gustaf, he removed his press to Sweden in 1659. Another well-known country press was that of Bishop Thomas Kingo at Odense, established in 1682, two hundred years after Snell had been at work in the same town. Several editions of his own Danish psalm-book as well as many finely printed works, including Vitus Bering's "Florus Danicus" (1698), were issued by Kingo's press.

During the earlier half of the eighteenth century the deterioration in the quality of the art of printing in Denmark touched its lowest depths. Most of the books of this period, among them the best known works of Ludvig Holberg, are very badly printed. About the middle of the century, however, printing seems to improve considerably, being influenced by

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the French school, at that time at its height. Among the presses that contributed to an improvement in printing was particularly the press of the Orphan-house, which had produced one of the most magnificent works ever issued in Denmark, viz., F. L. Norden's French book of travels, "*Voyage d'Égypte et de Nubie*" (1755), and the press of Andreas Hartvig Godiche, which printed a series of beautiful books, including a quarto edition of Holberg's "*Peder Paars*" (1772). In this work the Danish art of printing of the eighteenth century has reached its summit of excellence. At the end of the century, two distinguished presses were established at Copenhagen, that of Thiele (established 1770) and that of Schultz (established 1783), both of them being still in existence.

The length of the war and subsequent dearth at the beginning of the nineteenth century caused very bad conditions for the art of printing in Denmark. Most books printed during the first decades bear the impress of poverty. Not until 1831, when Bianco Luno established a new press at Copenhagen, were signs of improvement manifest. The press of Luno, which is still existing, was the first one in Denmark to make use of the new technical processes and the first one to procure a perfectly systematic assortment of types. In Denmark as well as elsewhere mechanical technique now dominated the production of books. In 1825 the first fly-press was introduced, and in 1875 the first rotary-press was set up. About the middle of the century the Danish typographer Christian Sørensen constructed the first practicable type-setting machine, winning the prize at the Universal Exhibition at Paris, 1855. In use for some

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years at Copenhagen, it was, however, soon out-distanced by more perfect inventions from abroad.

Initiated by the xylographer Frederik Hendriksen, a Danish book-trade union was founded in 1888, which has done considerable work for the artistic revival of printing, particularly by instituting a special school for printers. In addition to the ordinary industrial production of books, which during the present century has rapidly increased, several printers have devoted themselves to artistic book-printing. Particular prominence must be given to the two private printers Simon Bernsteen, who was much influenced by William Morris, and died in 1920, and Kristian Kongstad.

About seven hundred and fifty presses are at present to be found in Denmark, nearly three hundred of them being at Copenhagen. The principal presses are, besides the three above-named firms, Thiele, Schultz, and Bianco Luno, those of Græbe, J. Jørgensen & Co., Nielsen & Lydicke, Egmont Petersen, and Gyldendal Publishers, all at Copenhagen.

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SWEDEN.—The art of printing reached Sweden one year after the first book had been printed in Denmark, and it was the same printer, viz., Johann Snell, who introduced the art of printing into both countries. Returning at the end of the year 1482 from Odense to Lübeck, he worked about a year at this town and then, in the autumn of 1483, he went to Sweden, in response to a call from the archbishop of the diocesan town Uppsala, near Stockholm, who wanted Snell to print a Missal for the diocese. During the year 1484 the "*Missale Upsalense*" was finished at Stockholm. No complete copy of this book is extant, but, by means of several different fragments a nearly complete copy has been reconstructed, and is now deposited in the Royal Library at Stockholm. Snell, while staying at Stockholm, printed a few smaller books as well as the Missal, including an edition of the well-known collection of fables, "*Dialogus Creaturarum*," the colophon of which proves the printing to have been finished on the 20th December 1483. A little Latin Grammar, also belonging to the works printed by Snell at Stockholm, is, most likely, still older. This book, of which only a small fragment is extant, was recently found in an old book-cover, and is considered to be the first book printed in Sweden. After having finished the printing of the Missal, Snell returned to Lübeck in 1484.

The next printer to work in Sweden was the German Bartholomæus Gothan, also coming from Lübeck. At the request of the Swedish clergy he went to Stockholm in 1486 in order to print a Missal for Strängnäs diocese. During the following year the printing of it was finished. The only complete copy of this book

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known is now deposited in the old Cathedral of Strängnäs. Contemporaneously with the printing of the Missal, Gothan, while at Stockholm, executed several other works, including a Psalterium and a Manuale—both of them for the use of the diocese of Uppsala—and a little “Donat.” None of these works, some of which only exist in fragments, contain any indication of printer or place, but by an investigation of the types used they have been identified as the products of Gothan’s Stockholm press. In 1487 Gothan returned to Lübeck, where, later on, he produced several extensive works for Swedish patrons.

Departing from Sweden, Gothan left at Stockholm one of his assistants, named Johannes Fabri, who succeeded to the business. Probably a broadside on the sale of indulgences, printed in the year 1490, which is the oldest extant specimen in the Swedish language, was printed by him. The first book printed in Swedish was issued by Fabri in 1495, viz., Gerson: “Aff dyäfwlsens frästilse” (The Temptation of the Devil). Moreover, he printed at Stockholm two liturgical books, “Breviarium Strengnense” (1495) and “Breviarium Upsalense” (1496). Upon Fabri’s death in 1496 the press ceased to be active.

During the fifteenth century books were also printed in two of Sweden’s monasteries. In the renowned Birgitte cloister at Vadstena a little press was to be found which was only working during a few months in the year 1495, after which year it was destroyed by a conflagration. A little unfinished Book of Hours in Latin, the only existing copy of which is preserved in the University Library at Uppsala, is all that can be traced to this press. The

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other press belonged to the Carthusian cloister at the little town of Mariefred, near Stockholm, where a work of the Dominican Alanus de Rupe, "*De psalterio beatæ Mariæ virginis*," was printed, this of all the Swedish incunabula being the one we most frequently meet with.

During the first decade of the sixteenth century no press was to be found in Sweden. In 1510 a new one, which remained in existence till 1519, was established, this time at Uppsala. It was in the possession of Paul Grijs, the first printer of Swedish birth. The first book issued by this press was a *Psalterium* for the diocese of Uppsala (1510). Later on, Grijs printed some few tracts in Swedish, besides some Latin school-books, but, on the whole, his productions are very scantily preserved. The bishop, Hans Brask, established at the town of Söderköping in 1523 a little press which was originally intended for supplying the necessary liturgical books for his diocese, but later on he used it for printing Catholic propaganda literature. Consequently, the press was abolished in 1526 by order of King Gustaf Vasa, when the manager, Olof Ulriksson, formerly a priest, moved to Malmö, for many years working there as a printer in the service of the Danish Reformation. During the year 1525 a few Catholic books were issued at Uppsala, partly by Bartholomæus Fabri (probably a son of the above-named Johannes Fabri) and partly by the Lübeck printer Jürgen Richolff, junior, who a short time before had immigrated to Sweden. During the following period his work was of great importance in the development of Swedish printing.

In Sweden, as well as in Denmark, the introduction

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of the Reformation gave rise to a vivacious typographical activity, but still the Swedish production of books of the sixteenth century was neither in quantity nor in quality equal to the contemporary production of Denmark. Gustaf Vasa, who consolidated the Reformation in Sweden, was very anxious to supply the country with books necessary to the Evangelical Church, and so, for the purpose of printing these books, he established in 1526 a Royal Press at Stockholm, which up to the beginning of the seventeenth century was the only one in Sweden. The establishment of the press was placed in the hands of the two above-named printers, Jürgen Richolff and Bartholomæus Fabri, whose work at Uppsala was consequently broken off. The press was administered as a public institution, and Richolff, whose printing equipment was incorporated in the new press, was appointed manager. In 1527, however, he left Sweden and returned to Lübeck, the press thenceforth being managed by various printers of Swedish nationality. Among the first books issued by the Royal Press is a Swedish translation of the New Testament, published in 1526, and afterwards, for several years, the press was occupied in printing a great number of works, written in the Swedish language by the well-known Reformation author, Olaus Petri, to confirm the principles of the Reformation. Moreover, during the first years, translations of different parts of the Bible and psalm-books, etc., were printed for the use of the Church.

The most important problem under consideration was the printing of a complete Swedish translation of the Bible. During several years the preparatory

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labours had already been executed under the charge of the Archbishop of Uppsala, and printing being now possible, Jürgen Richolff was again called from Lübeck and once more appointed manager of the Royal Press. During the years 1540-41, however, the press was moved to Uppsala, where, for the sake of better facilities, the printing had to take place. In 1541 the printing of Gustaf Vasa's Bible was finished. This book, being the greatest work issued in Sweden during the sixteenth century, is a typographical masterpiece. It is beautifully made up, with wood-cut ornaments and illustrations. Remaining at Uppsala, Richolff printed a few more tracts, but in the same year he returned to Lübeck.

After the departure of Richolff, the Royal Press was removed to Stockholm, and a few years later it had a clever and enterprising manager, the Swedish printer, Amund Laurentsson, who remained at the head of the press till 1575. He printed nearly a hundred different books, the greater part of which were on religious subjects, as, for instance, psalm-books, prayer-books, catechisms, etc., also a series of political pamphlets of a polemical character, some of which were directed against Denmark. He produced the first books in the Finnish language, the oldest one of them being a prayer-book, issued in 1544. In 1559 Laurentsson printed the first book in Sweden in roman types, and in 1571 the first one in which italic types were used more extensively. His books are generally nicely printed and profusely decorated with woodcuts and ornaments. An edition in Finnish of the Book of Psalms, issued in 1551, is amongst the best of them.

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Among other printers managing the Royal Press at Stockholm in the sixteenth century may be noticed the German, Andreas Gutterwitz. Working as a printer at Copenhagen, he came to Stockholm in 1583 in response to a call from the Swedish king, Johan III. Managing the Royal Press till his death in 1610, he printed, like Laurentsson, essentially theological and political publications, besides a number of school-books, almanacs, etc. His production comprises some one hundred and fifty different books besides a great many ordinances and other official documents. The first book in Sweden printed in Greek was issued by the press of Gutterwitz in 1584.

During the sixteenth century several books were printed abroad for use in Sweden, especially in the North German towns of Rostock and Lübeck. During this century and the following one the Swedish printing was, like the Danish, greatly influenced by Germany.

With the opening of the seventeenth century a renewed typographical activity commenced in Sweden. In 1604 a new press was established at Stockholm by Anund Olofsson Helsing, who printed an edition of the New Testament (1605), and several Swedish codes of laws. His brother, Olof Olofsson Helsing, being a printer at Stockholm from 1617 to 1621, printed in 1618 a new Swedish Bible on the initiative of Gustaf Adolf, King of Sweden 1611-32, who paid great interest to the furtherance of the art of printing in his country. By order of the king, the Dutch printer and typefounder, Peter van Selow, was called to Stockholm, staying there until 1649. He printed, among others, some books in the Russian language,

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but he is most notable as a typefounder. * He thus supplied several of the presses, in the beginning of the seventeenth century being established at the Swedish country towns, with printing material. Among the Swedish printers of that age is still to be mentioned the German, Ignatius Meurer, who carried on a press at Stockholm from 1613 up till 1672. He edited the oldest newspaper of Sweden, "*Ordinari Post Tijdender*" (Ordinary Post Times), the first known numbers of which date from 1645. Among his many works is a series of fine editions of laws, one of these (from 1628) being the first book of Swedish text in roman types.

The most famous Swedish name of the seventeenth century connected with printing is that of Keyser, a family who, for three generations, played a prominent part in the typography of Sweden. The ancestor of the family, Henrik Keyser I., was born in Germany and settled in 1633 at Stockholm. In 1635 he became Royal printer. He printed a number of great and excellent works, including editions of the Bible in Finnish (1642) and in Swedish (1646). He was also an active publisher of newspapers. Upon his death in 1663, his son, Henrik Keyser II., succeeded to the business, and by his skilful management of the press he placed it on a better footing, his standard equalling that of the great contemporary presses abroad. In addition to the press, he erected a type foundry and in 1691 issued a fine type specimen book, showing his extraordinarily rich stock of types. Henrik Keyser II. was entrusted with the printing of Carl XII.'s Folio Bible, one of the greatest and most excellent works ever produced in Sweden. It was

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not issued until 1703, four years after his death. For a time his son, Henrik Keyser III., managed a branch, established at Uppsala, but later on he returned to Stockholm, where he died in 1707. The nephew of Henrik Keyser II., Aron Holm, succeeded to the great Keyser press in 1716.

During the seventeenth century two more presses were also active at Stockholm for a short period. One of them was a branch of the well-known Dutch printer Johannes Janssonius' press at Amsterdam, which was established in 1647, no doubt at the instance of Queen Christina, Gustaf Adolf's daughter, who was greatly interested in the Dutch methods of printing, which at that time were extraordinarily prominent. This branch was only kept going until 1656. The other press belonged to the German, Georg Burchardi, and worked from 1693 to 1708, printing a series of editions of the official Swedish psalm-book.

In the seventeenth century Uppsala was the first one of the Swedish country towns to have a press. In connection with the University an Academic press was established here in 1613. The best known of the managers is the German, Henrik Curio. His brother-in-law, the famous Swedish man of science, Olof Rudbeck, bought the press in 1685, and had his great work "*Atlantica*" printed there. Three volumes of it had been issued in 1698, but the fourth was spoiled by the fire of Uppsala in 1702, the press being destroyed by the flames. Västerås, Strängnäs, and Kalmar had also permanent presses a little later than Uppsala; moreover, a printing-press was established at Linköping in 1635, and at Göteborg in 1650. From 1666 to 1685 on the island of Visingsö a press was to be

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found belonging to the nobleman Per Brahe. Works issued by this press are considered great rarities.

At the beginning of the eighteenth century six presses were to be found at Stockholm, several of which were bought by the then owner of the Royal Press, Johan Henrik Werner, and combined with it. Though no longer a public institution, the press enjoyed certain privileges, and continued to be of an official character. Upon the death of Werner, it was taken possession of by Peter Momme in 1738, one of Sweden's most excellent printers, who in many ways conduced to the advancement of the profession in his country. While staying abroad, especially in Holland, where his family had originated, he studied the art of printing and introduced several technical improvements to his native land. He printed many fine books, one of the best of them being the great work "*Museum Regis Adolphi Friderici*" (1754). In 1768 the press descended to his son, while the privilege as Royal Printer was acquired by Henrik Fougst, whose press during many years was one of the chief ones in Sweden. A press of semi-official character was "*The Finnish Press*," for years owned by the family of Merckel. Among the printers of note of the eighteenth century is also Johan Laurentius Horrn. In 1717 he was appointed printer to the Academy of Antiquities, a position in which he was succeeded later by Lars Salvius, who belonged to the new school of printers, and, like Peter Momme, was full of initiative. At the end of the century Johan Samuel Ekmansson established a press at Stockholm, the output of which was highly influenced by the French art of printing.

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Carl Gustaf Berling, a member of the skilful Danish family of printers, acquired an older press at the University town of Lund in Skåne in 1745, and was appointed printer to the Academy. During the following century this press, which had been in possession of the family for many generations, developed into one of the greatest in Sweden, having branches in several towns. A well-known type-foundry has been added to the press, which still exists.

About the year 1800 the number of presses in Sweden had grown to thirty-five, thirteen of which were to be found at Stockholm. During the century the number was rapidly increased, in the 'eighties amounting to about two hundred. It was comparatively late before the new technical processes came into use. In 1829 the first printing machine used in Sweden was imported from England by the printer at the little town of Örebro, Nils Magnus Lindh, who, thanks to a lucrative Catechism privilege, worked up his press to be perhaps the greatest in Sweden at that time. Not until 1881 was a rotary press introduced for printing the Stockholm newspaper "Dagens Nyheter" (Daily News).

The greatest and most important press, the firm of "Norstedt & Sons," was founded at the beginning of the nineteenth century. In 1821, the Örebro merchant, Per Adolf Norstedt, bought an established press and type-foundry at Stockholm, and took his sons into partnership under the present name. Of the sons, Carl Norstedt was a specially prominent and skilful printer, and it was he who laid the foundation of the later fine developments. In the course of time it

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acquired a number of other presses, and now employs as many as nine hundred employees.

Among the many other capable Swedish printers of the nineteenth century is Ivar Häggström. In 1863 he succeeded to his father's great press at Stockholm, on that occasion procuring a perfectly new and modern equipment. His work has greatly contributed to place the Swedish art of printing on a higher footing. Another press, also of great importance in that respect, is "Centraltryckeriet" (The Central Press) at Stockholm, established in 1874 by a joint-stock company. Both of the presses mentioned still rank among the best in the country.

As in Denmark, about seven hundred and fifty presses are now to be found in Sweden, two hundred of which are at Stockholm. The modern Swedish art of printing is, both technically and artistically, on a very high plane, and ranks easily first in Scandinavia. A union of the book-trade, founded in 1900, has greatly helped forward this development. The great Swedish printers, such as Norstedt & Sons and Lagerström Brothers at Stockholm, and Almqvist & Wiksell at Uppsala, work admirably hand in hand with the bibliophiles of the country.

LITERATURE: *G. E. Klemming* and *F. G. Nordin*: *Svensk boktryckeri-historia*, 1483-1883. Stockh. 1883-84.—*G. E. Klemming* and *A. Andersson*: *Sveriges bibliografi*, 1481-1600. Uppsala, 1889-92 (unfinished).—*H. Schück*: *Bidrag til svensk bokhistoria*. Stockh. 1900.—*I. Collijn*: *Blad ur vår äldsta svenska boktryckerihistoria*, I.-VI. (Nordisk boktryckarkonst, 1905-20).—*I. Collijn*: *Bibliografiska miscellanea*, I.-IV. (Kirkohistorisk årsskrift, 1909-12), and V. (Nordisk tidskrift för bok-och biblioteksväsen, 1914-15).—*H. Lagerström*: *Svensk bokkonst*. Stockh. 1920.—*H. Schück*: *Den svenska förlags-*

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bokhandelns historia, I.-II. Stockh. 1923.—*I. Collijn* : Översikt av det svenska boktryckets historia, 1483-1700 (S. Dahls Bibliotekshandbok I., 1924, pp. 183-272).

ICELAND.—Iceland is the third of the Scandinavian countries into which the art of printing was introduced. About 1530 the Catholic bishop, Jón Arason, seeing the necessity of establishing a press to remedy the ignorance of the priests, summoned the first printer, a Swede, by name Jón Matthíasson, to the country. He established himself at Hólar, the residence of the bishop, in the northern part of Iceland, and there he printed, in 1534, "*Breviarium Holense*," the only book known to have been printed in Iceland prior to the introduction of the Reformation. The only copy of this book—being a reprint of the "*Breviarium Nidrosiense*," issued at Paris, 1519, but with a few local sections added—was found in the library of the learned Icelander, Arni Magnússon, but was destroyed by the fire of Copenhagen, 1728, and not until a few years ago was a little two-leaved fragment of another copy found in an old book-cover in the Royal Library at Stockholm. After the introduction of the Reformation in 1551, Matthíasson became a Lutheran minister at Breiðabólstaður in Vesturhóp, and brought thither with him the press. Three books are known, probably printed by him at Breiðabólstaður in 1559 and 1562; the first, a single imperfect copy, exists in the University Library at Copenhagen, and is an Icelandic translation of the Passion sermons of Antonius Corvinus, presumably the first Icelandic book printed in Iceland.

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Upon the death of Jón Matthíasson in 1567 his son Jón Jónsson, succeeded to the press, removing it to Hólar. Guðbrandur Þórláksson, recently appointed bishop, displayed a comprehensive literary activity. He acquired the press, and sent Jón Jónsson to Copenhagen to be trained and to buy further printing equipment. Returning in 1575, he carried on at Hólar a considerable amount of printing for the bishop, mainly producing religious books for the Church. His principal work is the first complete Icelandic Bible, finished in 1584, a large folio, decorated with many ornaments and illustrations. In 1589 the press was moved to Núpufell, but a few years later it was brought back again to Hólar, where Jónsson in 1594 printed a Graduale. He managed the press till his death in 1616.

Upon the death of Bishop Guðbrandur Þórláksson in 1627, who had energetically taken care to keep the press active, his successor took possession of it, and for years it was considered to be the personal property of the successive bishops. Till the very end of the eighteenth century this press was the only one in Iceland, but during all this time several Icelandic books were also printed in Denmark and Sweden. Till 1685, the episcopal press was situated at Hólar. Issued from here in 1644, after having been in hand for several years, was a new Icelandic edition of the whole Bible, printed by Halldór Asmundsson and published on the initiative of Bishop Þorlákur Skúlason. The ownership of the press was in 1685 awarded to a son of the latter, Þórður Þórláksson. Being bishop of the diocese of Skálholt, he moved it to Skálholt. He took great interest in literature,

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and till his death in 1697 upwards of sixty books passed through the press, which was managed by various printers, including the Dane Hendrik Kruse. Though heretofore having almost exclusively produced theological books, the press was now used in producing other kinds of literature as well, namely, a series of editions of the old Icelandic sagas. Upon the death of Þórður Þórláksson, the press was in 1703 sold to Bishop Björn Þorleifsson at Hólar, and was moved there, where, later on, it came into the possession of the Cathedral.

In 1772 a Royal licence was granted to a student, by name Ólafur Ólafsson, to erect a new press in Iceland, but certain monopolies were still retained by the old press at Hólar. Ólafsson established himself at Hrappsey, where the press remained until 1795; then it was moved to Leirargarður, and in 1798 sold to a scientific society. Next year, by Royal letter, the press at Hólar was joined to this new press, henceforth being managed by the founder of the society, Magnus Stefensen. In 1816 it was moved to Breiðastaður, and in 1819 to Viðey. After the dissolution of the society, the press was, in 1844, transferred to the capital, Reykjavík, and for a time it was here carried on as an official press at the expense of the Government.

During the latter half of the century, by degrees, several new presses were established in Iceland, first at Akureyri, then at Reykjavík, Ísafjörður, and Seiðisfjörður. Now the country has fourteen presses, seven of which are to be found at Reykjavík. The chief ones are "Fjélagsprentsmiðjan," "Gutenberg," and "Ísafoldarprentsmiðjan," all at Reykjavík.

Finland

LITERATURE: *J. Jónsson Borgfirðingur*: *Söguágrip um prentsmiðjur og prentara á Íslandi*. Reykjavík, 1867.—*H. Hermannsson*: *Icelandic Books of the Sixteenth Century* (*Islandica*, IX.). Ithaca, N.Y., 1916.—*H. Hermannsson*: *Icelandic Books of the Seventeenth Century* (*Islandica*, XIV.). Ithaca, N.Y., 1922.

FINLAND.—The art of printing was not introduced into Finland until the middle of the seventeenth century. From the Middle Ages the country had been politically united with Sweden, from 1556 as a duchy, governed directly from Stockholm. Like the Swedish country towns, the towns of Finland were supplied with printed matter from the Royal Press at the capital. During the reign of Queen Christina, and after the appointment of Per Brahe as Governor-General of Finland in 1637, a period of reforms commenced, leading for one thing to the foundation of the University at Åbo in 1640. The establishment of a press in connection with the University now became necessary, and so the Swede Peder Wald from Västerås was called to take charge of the office as academic printer. He established himself at Åbo in 1642.

The first output of this press in 1642 was a Latin dissertation of M. O. Wexionius, under the title of "*Discursus politicus de prudentia*." During the following year were issued the first Swedish and Finnish books printed in Finland, Isak Rothovius: "*Några christeliga boot predikningar*" (Some Christian Penitential Sermons), and an anonymous popular book, "*Keisaren Jesuxen Christuxen mandati eli käskey*" (Our Lord Jesus Christ, Mandates or Commandments). After an exceedingly limited activity

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Wald died in 1653, the press thenceforth being managed by different Swedish printers.

The Academical press, being poorly equipped, soon proved unable to accommodate the claims made upon it by the University and otherwise. Consequently another press was established in 1669 at Åbo by the bishop, Johan Gezelius, intended primarily for printing his own extensive literary productions. As manager of the press the bishop engaged a printer named Johan Winter, who had previously been working at Dorpat. During the following years he printed several books, besides Gezelius' own works, especially school-books and official prints, and in contradistinction to the press of the Academy, that of Gezelius displayed a lively activity. In 1683 a Finnish edition of the New Testament, and in 1685 an edition in Finnish of the whole Bible, were issued by this press. Winter, who had been appointed Royal printer of Finland in 1680, died in 1706. The press, upon the death of the founder, Bishop Johan Gezelius, was left to his son, who placed it in charge of Henrik Christofer Merckel, progenitor of a subsequently noted Swedish printer family.

Besides Åbo, Viborg was the only town in Finland during the seventeenth century in possession of a press. It was established in 1689 by the bishop of the diocese, Petrus Bång, in connection with a gymnasium at the town, and the management was entrusted to Daniel Medelplan, previously attached to the Academical press at Åbo as an engraver and type-founder; but he left Viborg in 1693. Neither he nor the subsequent printers of the gymnasium were able to execute work of any great importance

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on account of the meagre material at the disposal of the press. Mainly school-books, funeral sermons, and similar tracts were issued by the press, the output on the whole being very scanty.

At the commencement of the eighteenth century Finland was involved in the great Northern War, during which the Russians conquered the country. In 1710 Viborg was occupied, the press of the place being destroyed, and in 1713 Åbo was also occupied, causing the removal to Stockholm of the Academic and the Gezelius presses. During the period when Finland was without a press, a Finnish print is found which is rather exceptional in the later history of printing, an A B C, like the old block-books, being cut out on wooden boards. It was made in 1719 in a remote parish of the country by the earlier printer of the gymnasium at Viborg, Daniel Medelplan. Previously a copy of this curious book was to be found in the library of the Academy at Åbo, but it no longer exists, and no other copy is known.

The country settled down after the Peace of Nystad in 1721, which resulted in the cession of the town of Viborg to Russia, and the presses that had been removed resumed their work at Åbo. The peace was, however, of no long duration. During another war with Russia in 1741-43, the presses were once more brought to Stockholm. Returning to Åbo, the possessor of the previous Gezelius press, Jacob Merckel, a son of the above-named H. C. Merckel, bought the Academic press in 1750, and thus became both Academic and Royal printer. Later the press came into the possession of the family of Frenckell,

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originating in Germany, who began the publication of Finland's first newspapers: the first one in Swedish was issued in 1771, and the first one in Finnish appeared in 1775. Up to the beginning of the nineteenth century, with the exception of a little press working for a few years at Viborg, only one press besides the Frenckell press was to be found in Finland, namely, at the town of Vasa. It was established in 1776.

During the wars of Napoleon the Russians again conquered Finland, and in 1809 Sweden had to cede the whole country. The political agitation stirred up by the altered conditions caused the establishment of presses in several towns, especially for the purpose of producing newspapers. Helsingfors, in 1812 becoming capital of the country instead of Åbo, got its first press in 1818. Founded by J. Simelius, it still exists under the name of this firm. In 1828, after the fire of Åbo, the Frenckell press was moved to Helsingfors, likewise still existing here as a joint-stock company. Though the typographical activity constantly increased, the conditions of practising it during the rule of the Russians were very hard. In 1829 censorship was introduced, and in 1850 printing of books in Finnish, except for economical and religious literature, was prohibited. During recent years, especially since Finland became an independent state in 1918, the typographic production has grown considerably. While in 1875 only twenty-nine presses were in existence, now about two hundred are at work in Finland, most of them at Helsingfors, Tammerfors, and Åbo, sixty of them at Helsingfors alone.

Norway

LITERATURE: *F. W. Pipping*: Några historiska underättelser om boktryckeriet i Finland. Helsingfors, 1842-67.—*G. E. Klemming* and *J. G. Nordin*: Svensk boktryckerihistoria, 1483-1883. Stockh. 1883-84.—*V. Vasenius*: Outlines of the History of Printing in Finland. Lond. 1898.—*H. Nohrström*: Boktryckarkonstens historia i Finland (S. Dahls Bibliotekshandbok I., 1924, pp. 178-82).

NORWAY.—As Finland was supplied with printed books from Sweden, and thus for a long time had no press within its frontiers, so also was Norway contemporaneously supplied with books from Denmark. Up to the year 1814 the two countries were politically united, and under these circumstances nearly the whole earlier Norwegian literature was printed at Copenhagen; being a University town and the centre of the literary life of Denmark and Norway, it attracted most of the Norwegian authors. Not until 1643, one year later than Finland, did Norway get its first press. It was established on the initiative of the priest Christen Bang, who, in the year mentioned, called the Copenhagen printer Tyge Nielsen to Christiania (the present Oslo) to print Bang's own great work, "Postilla catechetica." Contemporarily, a Royal privilege for printing almanacs and school-books was granted to Tyge Nielsen, who during the year 1643 printed three small books, "Enke-Suk" (Widow-sigh), "En mærkelig Vise om den yderste Dommedag" (A curious Song on the Day of Judgment), and an almanac for the year 1644. Which of these items was the earliest is not known. Only one copy of each of them is extant; the two first named exist in a Danish library, the old "Karen Brahes Library" at Odense,

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the third in the University Library at Oslo. The following year a series of more important books went through the press. The printing of the work of Bang, however, came to nothing, and that is the reason why Tyge Nielsen, in 1644, was deprived of his press, which, after legal proceedings, was taken possession of by Bang, who had advanced money to the printer.

After Oslo for a couple of years had been without an active press, the University printer, Melchior Martzan of Copenhagen, established a branch at the town in 1647. The journey of King Frederik II. to Norway in 1648 gave rise to the issue of several works from this press. In 1650 the first volume of Bang's "Postil" appeared. In the same year Martzan made over the branch to his overseer, the German Valentin Kuhn, who died in 1654. Some years later the printer Michel Thomesen of Copenhagen came to Oslo at the request of Bishop Henning Stockfleth to take charge of the press. He finished the printing of Bang's "Postil" in 1665, amounting to about nine thousand pages in quarto, one of the most extensive works ever produced in Norway. In the 'seventies another press was founded at Oslo by the bookseller Hans Hoff, who gave the management to the two German printers, the brothers Jørgen and Wilhelm Wedemann. It was, however, soon seized by the authorities, the sole privilege being in possession of Thomesen. Then Wilhelm Wedemann moved to the little town of Frederikshald, working there for some years, but in 1688 he returned to Oslo, and an agreement was made by him and Michel Thomesen as to the distribution of the typographical work of the town.

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In the same year Thomesen died, and Wedemann obtained his privileges. Thenceforth and up to 1809 the press founded by Wedemann was the only one at Oslo. One of the possessors, the German Samuel Conrad Schwach, began in 1763 the publication of the first newspaper of Oslo, "*Norske Intelligenssedler*" (Norwegian Intelligence Notes).

Bergen, till the commencement of the nineteenth century the greatest town of Norway, had no press until the year 1719. Then the Copenhagen printer, Peter Nørvig, moved his business to Bergen. Soon after his arrival he began the publication of the first newspaper of Norway, "*Ridende Mercurius*" (Mounted Mercury), which, however, soon ceased. Upon the death of Nørvig, the German, Christopher Kothert, succeeded to the press. In 1760 he had a competitor in the priest Hans Mossin, who, during this year, founded a press at Bergen, essentially intended for printing his own literary production, but it was given up in 1775. The press founded by Nørvig was sold to Rasmus Dahl in 1782, and remained in the possession of his family for a period of nearly a hundred years. Up to 1825 the Dahl press was the only one at Bergen. In 1881 it passed to the family of Grieg, under whose excellent management it developed into one of the best presses of Norway.

Among other country towns of Norway Trondhjem must be named, with its first press in 1739, and Christianssund, where the first press was established in 1779. Like other later provincial presses, these were chiefly occupied with printing for local privileged advertisers.

In the beginning of the nineteenth century an

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improvement in Norwegian typographical production commenced. In 1812 the chief press of the country, the still existing firm, "Grøndahl & Son," was established at Oslo. The founder, Christopher Grøndahl, worked in conjunction with the patriotic "Selskab for Norges Vel" (Society for the Welfare of Norway), whose numerous publications he printed, and in addition he was working for the Norwegian and British Bible Societies. The first printing machine of Norway was procured in 1840 by Grøndahl. Upon his death in 1864 the business descended to his son, and afterwards to the latter's son, Carl Grøndahl, who, in 1890, became head of the firm. With great ability he managed the press, now amongst the best and most esteemed ones in Norway. A press, likewise grown to be of great importance, was established at Oslo in 1838 by Peter Tidemand Malling. In 1875 it was turned into a joint-stock company in close connection with the newly founded Aschehoug publishing firm. Issued by the Malling press is one of the most excellent works produced of late in Scandinavia, viz., Leonardo da Vinci's "Quaderni d'anatomia" (1911-1916). This work obtained the highest prize at the International Exhibition of Books at Leipzig, 1914.

In 1900 a book-trade union was instituted, working on the same principles as the corresponding unions of Sweden and Denmark. A special school was opened in 1908 on the initiative of the Oslo printer's union.

At present some two hundred and forty presses are to be found in Norway, about seventy of them being at Oslo. The chief presses are, besides the above-named firms, Grieg, Grøndahl, and Malling, those of Fabritius, A. W. Brøgger, and Steen, together

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with "Centraltrykkeriet" (The Central Press), all at Oslo.

LITERATURE: *O. A. Øverland*: Den norske bogtrykkerforening, 1884-1909. Med træk af boghaandværkets historie og arbejdskaar i Norge. Christiania, 1909.—*H. Scheibler*: Bogtrykkerkunstens og Avisernes Historie. Christiania, 1910.—*A. B. Wiium*: Bogtrykkerfaget i Norge (Boktryckerikalendern, 1921, pp. 134-54).—*L. Nielsen*: Det danske og norske Bogtryks Historie (Haandbog i Bibliotekskundskab udg. af S. Dahl, 3. Udg. I., 1924, pp. 172-227).

GREENLAND.—The first book in the Greenlandish language was printed at Copenhagen, 1739. It is an a-b-c book, edited by the Danish priest, Hans Egede, the first missionary to Greenland. The first book known to be printed in Greenland is a collection of Greenland psalms, produced in 1793 by Herrnhutic missionaries at the station of New Herrnhut, near the Danish colony of Godthaab in the south-western part of the country. Only one single imperfect copy of this book is extant in the Royal Library at Copenhagen.

During the following period numerous Greenland books were issued, but all of them were printed abroad, chiefly at Copenhagen. Not until after the middle of the nineteenth century were books again printed in Greenland. In 1855 a little psalm-book in the Greenland language appeared, printed with a primitive hand-press by the German missionary, Samuel Kleinschmidt, then a member of the Herrnhutic communion, but later a teacher in a seminary in the Danish colony at Godthaab. During a series of years he printed in a similar modest style several books in the Greenland language, chiefly popular

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educational books, composed by himself, and works for the use of the seminary.

Almost simultaneously with the beginning of Kleinschmidt's typographical work, the Danish inspectorate established a permanent press at Godthaab under the charge of a native Greenlander, Lars Møller, who was sent to Copenhagen to serve an apprenticeship. The first book, issued in 1857 by this press, is an account in the Greenland language of the travelling adventures of a native, told by himself. The first large work of the press is a collection of Greenland legends in four volumes (1859-63), decorated with woodcuts by Greenlanders. In 1861 Lars Møller commenced the publication of the magazine "*Atuagagdliutit*," which is still being published. It contains entertaining and instructive subjects, and has been of great importance in the enlightenment of the Greenlanders. Till his death in 1926, Lars Møller managed the inspectorate press, employing several regular assistants, and equipped with a printing machine since 1911. In addition to the magazine and a few, mostly religious, books, the press produces all the printed matter requisite for the administration of the country.

Besides the press mentioned, another is to be found at Godthaab in connection with the seminary of the place. It is now printing a couple of small church papers and Greenland school-books. A third press is to be found at the colony of Godhavn in Northern Greenland.

EASTERN EUROPE AND SLAVONIC COUNTRIES

BY L. C. WHARTON

HUNGARY.—The area is that of ethnographic Hungary, though the extensions in Slovakia (the greater part of the Hungary of the sixteenth century) and Transylvania (the refuge of the Protestants and of the opponents of the Hapsburgs for so long) have to be brought into the reckoning.

It must be remembered that, apart from these places, there were a long series of presses concerned with printing matter for the Hungarian market, not only in foreign languages like Latin, but also in Magyar, at Cracow, Prague (particularly for the Protestants), and in a lesser degree Vienna. Protestant service books in Magyar were printed for the troops of occupation at Cracow in 1806: so the tradition is lasting as well as old.

The fact that Bratislava (Pressburg, Pozsony) was, during the Turkish occupation of Gran, the coronation capital of Hungary brought much purely Magyar printing and publishing there, which tended to overshadow the native production in the eyes of uninstructed outsiders.

Thanks to an anomaly hard to explain, Budapest brings to Hungary the honour of being a town with a press of the incunable period, that of Andreas Hesse of 1473.

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Though the king, Mathias Corvinus, showed himself a pitiless foe of the printing press (as, for instance, in his more than rigorous treatment of the unlucky printers during his occupation of Vienna), his chancellor, Vladislaus Gereb de Vingart, called in Hesse from Italy. He printed the "*Chronica Hungariæ*," and is supposed to have printed two other books at Buda. The editor of the nineteenth-century edition seems to think the other books might have been printed in Italy, though well calculated to appease the king's taste. However that may be, the chancellor died in 1502, and his translation to Kalocsa from his Transylvanian diocese in 1476 or 1486 suggests a good reason why we have not more than a dubious three books from this press.

There are no more books printed in Hungary, even in a rather wide sense, till after 1526. Hence there is a complete break in the history of the Buda-Pest presses. Indeed, there are other long periods when the Turks prevented printing there—as also the imperial army of occupation that came on their heels.

The earlier two books of Hesse were St Basil the Great, "*De legendis poetis*" and "*Apologia Socratis*," neither dated.

About ten years later Koburger printed the first book in Magyar at Nuremberg (1484). This was a book about St Stephen, the first Christian king of Hungary.

The first grammar was printed by Vietor at Cracow in 1550.

We may legitimately give the dates of the first books in Magyar printed in the Transylvanian towns.

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Thus we find Nagy-Szeben (Hermanstadt) in 1529, Brassó (Kronstadt, Corona) in 1534.

The character of Poland's press is partly reflected here, for private presses in one or other of the senses there explained are numerous, *e.g.* that set up at Ujsziget (Sarvár, Eisenburg, Insula Nova) by T. Nadásdy, Ban of Croatia, and Benedek Abadi, in 1536 or 1537. Or again the press of Péter Bornemissza, the preacher (his *Postilla*, 1569).

It is interesting to note the Czech and Polish influence on one such press which printed Stephen Pathai of Pápa's work on the Sacrament in 1593. Here *n* was used for the usual *ny*, and other such simplifications of the diglots now used were practised.

The Magyar New Testament in János Sylvester of Erdős's version was printed in 1539, but in 1542 the printing of Hungarian in Hungary ceased, and Cracow served future needs for a long time, while gradually Cluj and other Transylvanian towns served the purposes of the Protestants. Similarly the Protestant printer, Gaspar Heltai, noted for his work at Cluj and Ung. Altenburg, was also one of the foreign printers at Wittenberg (1555).

In 1558 Heltai rejoined his former partner at Cluj (Gy. Hoffgreff), and they produced the Magyar Agenda in 1559. Hoffgreff had printed in 1558 by himself: "*Acta Synodi Pastorum Ecclesiæ Nationis Hungaricæ in Transylvania.*"

The other printer at Magyar Óvár (Ung. Altenburg) is not known by name (1558 onwards).

In 1560 we find a revival of printing in Hungary proper, at Debreczen, with an anonymous press. It was here that Rafael Hoffhalter and his son paid

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visits, and were uncomfortable rivals for the established native presses. He printed his first Hungarian book at Vienna in 1561 (Draskovics). In 1563 we find Mihaly Török as the printer of a book by Gaspar Károli. In 1565 Hoffhalter makes his first appearance here with a book by Peter Melius, and the same year is at Várad, by which time he and his family are incurable wanderers. Meanwhile Török is still working in 1568. One is tempted to guess that his name is a pseudonym.

Hoffhalter is said to have been *typographus regius* of John Sigismund Zapolya, Prince of Transylvania; he was at Alba Julia (Gyulafehérvár) from 1567-69.

Eperjes is recorded as having one book printed there in 1573, while a similar solitary book is the "Heidelberg Catechism" of 1587 at Pápa, by D. Huszar.

Trouble is caused by a tendency to use false imprints, many of which must be as yet untraced. Thus Velágesvár (the tragic Világos) is credited with a press of one J. Manlius in 1582, but this is impossible, as the Turks held it, and the book was probably printed at Német-Ujvár (Deutsch-Neuburg). Under this last heading I find a book by the same author in the same year, despite the imprint Gyzzingváros.

In 1578 we find what is probably the famous Jesuit press of Tyrnau masquerading as a press in the house of Michael Telegdi, in the authorized Roman Catholic version of the Gospels (=Nagy Szombat). But a Protestant book by Bornemissza appeared there the same year, so there must have been two presses at least. In 1603 we find a press of the Chapter of Gran there, presumably the Jesuit press.

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About this time there is a Protestant printer at Bratislava named Gottfried Gründer, and in 1678 a Johann Zierweg.

In fact, in the seventeenth century printing centred on Tyrnau for the Roman Catholics and Bratislava for the Protestants, both being in Slovakia.

In this century the Jesuits obtained the Kaschau (Košice) press and the monastic press of Csik-Somló (where a Franciscan was at work in 1670).

There was also a press at Cseppez, near Pápa.

The press of Lipsai the elder, after it had passed to his sons Paul and Peter in 1620, was acquired by the city of Debreczen in 1630. Remarkable development followed this. In 1709 came the Imperial (German) army and destroyed all Protestant cultural activities—schools, church, and press. Sarospatak's press was also wiped out at the same time. (This press had been re-established by Suzannah Lorántfy in 1650. Despite the short time it lasted it had very great influence on the development of native literature, and was illustrious for its share in the career of J. A. Comenius. The Jesuits got hold of this press in 1672.)

The press of Alba Julia under Martin Major overshadows this and most other Hungarian presses, but belongs more properly to Roumanian typographic history.

Closely associated with neighbouring Czech and Polish presses over the border were those at Bártfa about 1579—late because it was impossible to compete with Cracow in the days of its sixteenth-century splendour even with Magyar books. This first printer is David Gutgesell. J. Kloss's press at Bártfa came

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into the possession of the city in 1598, as that of Debreczen did in 1630.

The last great work was Guevara's "Golden Book of Marcus Aurelius" in 4to. About 1728 the press was bought by the Kaschau Jesuits and transferred to Kaschau.

Leutschau (Lőcse, Levoča) was the metropolis of the six towns of the highlands. Note that it was hither that Fioł came to die.

Here Lőrincz Breuer is the best printer, though J. Kloss had moved here and set up his press, whose Greek type was of special value. His widow and then his son John carried on the press after Breuer's death. In 1664 J. Breuer came back with foreign degrees (M.D., etc.), and became a first-class printer of very great fame, especially for the elegance of the design of his type, which bore comparison with the best Dutch and German work.

Samuel Spilenberger established a paper-mill at Teplicz, in Zips, counted as the second Magyar paper-mill, which later belonged to the town of Lőcse, whose needs in paper it also served. Its arms are those of the town, with a difference of slight character.

Most of the paper used in Hungary came from Poland, and the paper-mill established in Kronstadt, Transylvania, in 1546, for Magyar use was founded by a Pole. The mills in Hungary were all close to the Polish border.

There was a general decline of printing in Hungary in the seventeenth century, as elsewhere, and most Magyar authors sent their works abroad to be printed. On the other hand, presses were set up abroad which might in some cases almost be called Magyar.

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From 1640 on the press of Abraham Kértész of Szencz, at Grosswardein, formed an exception to the technical decline, he having learned his craft in Belgium and enjoying the patronage of Count Stephen Bethlen.

When the Turks besieged Grosswardein in 1660 Kértész fled to Cluj, Transylvania, just before he produced his great Hungarian Bible, which, however, is spoken of as that of Grosswardein, though printed at Cluj in 1661. He moved on to Hermanstadt later, and there died in 1667. Prince Michael Apafi of Transylvania acquired the press, and in 1672 presented it to the Calvinist Colleges of Cluj and Nagy Enyed.

The fame of Kértész was far outshone by the printer of the Magyar Bible of Amsterdam, Michael Kiss of Misz-Tótfalu. Much of his career was spent abroad, for he cut the new types for the Bible, but he was also of a mixed origin. His name Kiss is the same as Klein, which would indeed often be used in German books, but his origin is from the Slovak village of Misz Tótfalu. It is no surprise to hear that such a man was a good linguist.

He cut the square Hebrew character for the German and Polish Jews, as well as the first Armenian and Georgian alphabets. He went back to his country instead of becoming printer to the Grand Duke of Tuscany and had a very unpleasant time at Cluj, where the Calvinist clergy attacked him because he applied critical canons not approved by them in producing his Bible. He died in 1702.

A decree regulating the censorship of books was issued in 1715 which had a great effect on the subsequent history of printing.

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As a consequence the Debreczen Calvinist, Campegius, authorized Vitrenga to print the Komorn Csepkes Bible at Leyden. In 1718 it was printed and sent off via Poland. On their way into Hungary the Roman Catholic Bishop of Erlau (Eger) seized the copies forwarded from Danzig and handed them over for censorship to the Jesuits of Kaschau (Kassa, Košice). They found it harmless with two exceptions, the absence of the Apocrypha and the use of *nevère, into the name*, instead of *nevében, in the name*, in the baptismal formula, which they considered blasphemy and so condemned the whole lot. The remaining copies at Leyden were sent to Danzig and thence to Warsaw, where they remained till 1789, when they were able to be delivered at Debreczen!

In Transylvania there were just nine unprivileged, *i.e.* Protestant, presses, which need not be enumerated here, though they were mainly Magyar.

The Komorn press worked from 1789 to 1835 without a privilege.

The press of Debreczen fell into a decline on the artistic side in the eighteenth century. The press had been destroyed by the Imperialists, and Paul Kassai reorganized it, but, under his successor, F. Miskolczi, it was burnt down, and Paul Viski had to restore it. He was succeeded by John Margitai (till 1752). The latter also printed Slav religious books as well as Latin and Magyar.

George Kallai was the manager of the press after Stephen Margitai. In 1774 it was decreed that one of the two official inspectors of the press should always be a Roman Catholic. In 1790 the press was burnt down again, but the city rebuilt it.

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Sopron (Oedenburg) had its first press in 1725, being founded by Joseph Anton Streibig, a German from Würtemberg. In 1726 he produced and published the "*Titulare Calendarium seu Schematismus regni Hungariæ*," an annual. He afterwards migrated to Raab, where he issued a *Schematismus* in 1730. He only acquired a privilege in 1731. Though permitted to include the *Schematism* in his calendar, this was only on condition of submitting it to a previous censorship. His heirs carried on the work till the end of the century.

The first press at Buda after the removal of the Turks was set up in 1724 by J. Landerer. The business did not pay in the desolate state of the city and neighbourhood, and after three years it was surrendered to George Notenstein, a man of means. His widow, Veronica, carried on the business after his death till 1750. After this the press reverted to the Landerers. Leopold Francis Landerer worked with a privilege till 1764. Later on a son of the same name was declared holder of the business by the consul. In 1779 Katalina Landerer took on the press and made it greater by aid of the Pest press of the Royers. This carries us to the end of the eighteenth century.

Jean Paul Royer of Salzburg had some dealings with the town clerk of Bratislava in 1715, and ultimately set up in Bratislava.

The Buda printer, J. M. Landerer, bought the business with a Maria Theresa privilege from Francis Royer in 1756. There were branches at Kassa, etc. The arrival of alien printers at Pest shows the improved prospects.

In 1795 the press of Katalina Landerer employed

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one Michael Landerer, a former member of the conspiracy of Martinovics. Michael Landerer caused the revolutionary catechism, "The Citizen and the Man," to be printed in the cellars of the firm at night.

It was found out and the court sentenced Landerer to imprisonment and the tribunal of seven to death. This was commuted to ten years' hard labour by a royal pardon.

The authority who cites this does so as an instance of the arbitrary nature of the tribunal set up by the legislation of 1715 above mentioned.

The scrappy nature of this account corresponds with the fate of the press in Hungary, harmonizing with that of the country as of all others afflicted with the twin plagues of the Turks and Hapsburgs. The press cannot live where the very elements of civilized life are absent or liable to sudden, irrational upheavals.

POLAND.—The area concerned is that of the historic Polish Republic, *i.e.* Poland with Ruthenia and the Grand Duchy of Lithuania, including the whole of White Russia and West Russia.

Apart from service books of obscure local uses which might be from the Breslau press (these being of 1468), the earliest dated book for Poland is one of 1474 at Cracow. There seems every reason to believe that the book "*Johannis de Turrecremata, Cardinalis S. Sixti vulgariter nuncupati, explanatio in Psalterium finit Cracis impressa*" (Panzer, xi., 319) was printed at Cracow in or about 1465, despite the contention in favour of Gratz, or Greitz, put forward, in a cloud of inaccuracies, by Bernhart. All the known copies are directly or indirectly from Poland,

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and most from the neighbourhood of Cracow. One may add that the extra leaf in one issue of Hartmann Schedel's "*Weltchronik*," with the map of Poland, has the imprint Cracis, as have other things undoubtedly printed at Cracow, besides the colophons of MSS.

The Psalter is attributed to Günther Zainer, and it is interesting to find that the collected "*Augustine*" associated with this and dated about 1475 is placed as Zainer's earliest undated work by Proctor.

This is not, however, a permanent press, nor is it claimed, even if he came to Cracow to do it, that Stücks of Nuremberg set up a permanent press for the two liturgies. His coming to Cracow to do them seems unlikely, despite the Meissen analogy, when we know of Cracow liturgies printed at Breslau.

Further, there are *Constitutiones et Statuta*, printed before 1496, which are confidently attributed to Cracow. Then we have "*Ciceronis ad Herennium Rhetoricorum Lib. iv.*," 1500, probably by J. Haller, the man who established the first permanent press in Poland. There is a story of a collaboration between him and Jan Glogowczyk, probably also a German, which points to fifteenth-century work by them, as the latter died in 1507 and the former in 1503.

Cracow is also famous for the first books printed in the Cyrillic character, the work of Szweipolt Fioł and Günter Zainer and of Fioł and one Frank in 1491. The Venice Chasoslov was in Glagolitic character. Fioł's books included a Chasoslov, Octoechus and two Triods.

He did no printing after the persecution to which he was exposed, and retired to Levoča, where he died in 1525.

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The Jewish presses were early and distinguished, the greatest printer being Isaac ben Aaron Prostitz, from Moravia, who printed both Talmuds in 1603-9. His earliest book was said to be of 1550 and his latest of 1630. A likelier date for the last would be 1610. The earliest Jewish book at Cracow was a Pentateuch of 1530 and there were several other Hebrew books.

In the sixteenth century we have to remember certain great names—as H. Vietor, who served his apprenticeship under Haller at Cracow, but first set up for himself at Vienna. Later he established a branch at Cracow, which became his headquarters when he settled there in about 1515-18. He was related to the Scharffenbergs, one of whom bore his Christian name. Nicholas Scharffenberg was to Polish book-production what Koburger was to German. His output is supposed to be equal in quantity and quality to that of Aldus. The Scharffenbergers were Silesians, as was Vietor, and probably kin to the Scharffenbergs. Mention of one Büttner reminds one that the German word for Vietor is Büttner. Our Vietor had a clerical brother, Benedikt Büttner.

The Cracow press had a remarkable list of able and learned printers, even in the worst periods. Men like the Cesarius family would be distinguished at any time.

In 1525 we find F. Skorina transferring his private press from Prague to Wilna and ending his career as a printer with the *Apostol* and *Malaja Podorožna Knižica*. An interval of fifty years without a press is followed by the coming of Petr Timofjeevič Mstislavec, who was printer to the Mamonicz family, single-handed at first, but was soon dismissed, and the family began their remarkable career of printer-

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mecenases. At first the patronage of the Treasurer of Lithuania and his brother was needed, but this seems to have ceased with the disappearance of Mstislavec. One is tempted to believe that Mstislavec was printer to the Treasurer privately as well as working for the earliest Mamonicz press. A similar enigmatic position arises more than once in the history of the press of the Radziwills, the oldest continuously established press for Polish and Lithuanian, the present-day press of Józef Zawadzki.

In Poland we find three kinds of press described as private, and the same is true of some neighbouring lands. The first is the pioneer commercial press working under the protection of some noble or citizen and to be held as a candidate for a royal privilege. Then there are two kinds more familiar to us. First the scholar or learned citizen or noble who is his own printer (like Skorina)—usually with a view to wider circulation than could be given by MS. The other type has indeed a press of his own nominally, but has the actual work done on the premises or elsewhere by a professional printer.

All three types are extraordinarily common in Poland at all times, and the transitional forms have led Bandtkie astray, as well as Hoffmann, into the denial of the existence of presses of which there is clear external evidence. One cannot on this scale follow up all the one-book presses, but in settling the priority of one place over another we must include all kinds of printing, even surreptitious. This at once lifts Wilna over Rakow and probably Lublin. From the Mamonicz press the typographic history of Wilna is continuous.

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The next town to have a press is Lublin, long the metropolis of Jewish learning in Eastern Europe. Here the first press is a Jewish one, that of Kalonymus ben Mardochai Japhe. He is printing alone in 1562 and 1575 and 1577. He is one of the five socii who began the printing of the Talmud of 1559-76. (It was finished by individual printers doing individual books.) The second press is that of R. Joshua bar Israel Austriacus, the greatest printer of Jewish books here (c. 1617-27). The next is that of Abraham ben Kalonymus Japhe, 1611-47. R. Tsebi ben Abraham Kalonymus (whose Talmud was printed by Austriacus) was himself printing in 1620-27. The first Christian press is that of Szmieszkowicz, who printed a "Via Crucis" in 1622. The next is that of Paulus Conradus, 1630-36. His widow carried on the press from 1636 to about 1646. About this time the Jesuits set up a press which flourished till after 1740.

Jan Wieczorkiewicz was printing from 1640 to 1656 and his widow is at work in 1659. There is a bookshop of one Jerzy (Georg) Förster, also of Danzig and of Warsaw—c. 1643-60—whose claim to be a printer is not clear. One Stanislaw Krasunski is printing 1661-65.

An anonymous Jewish press of 1682 is printing Christian service books, though selling of such by Jews is earlier recorded in Cracow with disapproval.

Then we have the Lemberg printer L. Szlichtyn at Lublin in 1774, when the Jesuit press becomes, somewhat belatedly, that of the King and Republic.

The Trinitarians seem to have got this S.J. press in 1782, though they only got the church in 1785, and kept the press till 1812.

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The next town is that of Szamotuly, which is typical. A church, school and press were set up here by the Moravian Brethren, under the patronage of Andrzej Gorka, and it was their first and most important press in Poland, lasting till 1655. Alexander z Aujezda (occasionally called Avizdecki by Poles) came here from Königsberg in 1558, and printed one known book.

The very frequent movements of printers as individuals and of presses in this area make the detailed mention of all the interesting ones impossible here.

The next town to develop a press was Lemberg. The Russian printers were first in the field.

In 1573 Ivan Thedorov "renewed" the Lemberg press. Details—and evidence—for the earlier press are lacking, except a hint that it was Jewish.

There were five Ruthenian presses—that of Thedorov, that of the Stavropigialnoe Uspenskoe Bratstvo, that of Michael Sliozka (who was also printer to the Bratstvo), and finally those of Bishops Arseny Želiborski and Joseph Szumljanski.

Of these the first was very soon ended, for Thedorov went to Derman and Ostrog to print for the Prince before 1580 (when the Bible was already finished), and died soon after his return to Lemberg, without doing any more printing.

The Bratstvo was the first to establish a permanent press, which still exists. They did their first work, a charge, in 1591. Matthias Bernart founded the first Polish press in 1593. The only rival for longevity to the Bratstvo press is the Jesuit press, issuing books in 1646 and in existence in 1772. Earlier than the Bernart press above are two appearances of Cracow

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printers in Latin at Lemberg, rather enigmatic. These are: Nicholas Scharffenberger in 1578 and Matthias Garwolinius, 1592. Then Pawel Szczerbic, Syndic of Lemberg, translated, published and printed the *Sachsenspiegel* in 1581. The history of the presses of Lemberg is continuous from 1591 to now, the only gaps in our knowledge refer to the early Jewish and Armenian presses, which must have existed, though nothing is known of them.

Two towns with a very similar name seem to have been successively next to acquire presses. These are Lubiecz on the Niemen, and the one on the Hron. The Lithuanian town had a Socinian press, founded by Jan Kiszka, and closed at his death in 1592.

The press of the other was begun by Piotr Blastus Kmita, son-in-law of Karcan of Wilna, near whom he set up before going to Lubiecz. His books at Lubiecz range from 1612 to 1628. His son Jan is printing about 1633 to 1644. He is succeeded by a Lutheran, Johann Lange, whose books run from 1648 to 1655. In this year the Swedes devastated Lithuania, with fatal results to their fellow-Protestants, whose presses suffered worse at the Swedes' hands than from avowed foes, both here in Poland and in the Baltic. All the printers here seem to have been printers to the Radziwills.

Kalisz acquired a press early in the seventeenth century, for J. Wolrab of Poznań printed a book in 1603, and we have others from him down to 1635. The Jesuits started a press here in about 1650 which survived the Order. Then there is a press of the Primate (Gnieźno) about 1782-93, and one founded by K. W. Mehwald (1798-1815, 1821-22).

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Ignoring the small presses in small places, the next most important place to name is Warsaw. There is some reason for doubt about its relative position in date, for we have a few early books, and then a gap. N. Scharffenberger printed Kochanowski's "Odprawa posłów Greckich" here in 1578, and probably his "Ode" in 1580 and the Danzig Charter of 1578. The rest of his career, apart from the above reference at Lubiecz, is at Cracow.

The next presses are obscure, but help to justify a greater respect for the age of the Warsaw press than Hoffmann can quite succeed in feeling. Indeed he arranges Warsaw as founded about 1620, for J. E. Rossowski founded the first press to last. He came from Poznań, and is printing from 1623-24 to 1633. His widow is named as printer in 1634. Next comes J. Trempinski, a poet first, then royal printer. Amid the hazy reports it appears that he printed from 1635 to 1648, though his privilege seems to date from 1647 only. This is a common phenomenon in Eastern Europe, especially Poland.

The next press is much the most famous, to the extent of being reputed later on as the earliest press in Warsaw. This is that of Piotr Elert. His first privilege is of 1643, and in 1645 he got a privilege for a binder, as he was also a bookseller. His widow and heirs begin to print in 1653. In 1655 they received a privilege which was confirmed in 1664, and passed as a law of the Diet in 1668. Then two additional premises were given to the firm, and freedom from billeting. The new privilege of 1675 is supposed to show that it had been taken over by the State. In 1676 it is the heirs alone who print. K. F. Schreiber

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worked for them ; though he had a press of his own in 1677, yet his name is used in a book of the Elert firm in 1684, the name Elert having been revived in 1681. Schreiber got three privileges from John Sobieski (a great patron of the press), one in 1684 for founding a press, presumably *ex post facto*, as so often. Another privilege of 1684 is for keeping this press as Drukarnia Królewska i Rzadowa Rzplitej, Skarbu Koronnego i Litewskiego. In 1685 he came into possession of all Elert's privileges, and got leave to found a bookshop for the sale of Elert's and his widow's and Kosinski's books, and print new ones. In 1690 the debts inherited from the Elert firm compelled Schreiber to try and sell both businesses to the Piarists. In 1690-91 he and the Piarists are printing side by side. He died soon after, and by 1694 all the privileges had passed to the Order. It may be noted that Schreiber called himself printer to the Bishop of Poznań in 1689. The Piarists had long been gathering up presses and privileges, and the one of 1694 confirming the transfer of the Schreiber-Elert privileges is a confirmation of them. The purchases began in 1675, and they got a new privilege in 1701, confirmed at the Diet of Grodno in 1726, and for a time theirs was the only press in Warsaw. It is significant that their press was sealed in 1754 for printing a book condemned to be burnt, but that this had no effect on their great output. At this very time a fresh press was added, and fresh types got from Breitkopf, as also in 1766 and in 1792. This was one of the most active presses in Poland, and its books cited by Bandtkie range from 1683 to 1784.

The eighth press is that of the Jesuits, whose

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earliest cited book is 1717 and last 1795. King Stanislaus gave them a privilege in 1735, and in 1764 we find them called Druk. J. K. Mości i Rpltej u Soc. Jesu. In 1772 the press went to the Education Commission, and was called Druk. Nadworna i Kommissyi Edukacyjnej. At first it was run by ex-Jesuits, later by laymen. What remained passed into the Government press in 1806. One book of 1794 may be from a private press, being W druk. X. J. Maiera w Starem mieście pod num. 45.

The next press is that of Lorenz Mitzler de Kolof, a Saxon medical man, who followed the king from Dresden to Warsaw, where he set up his own press for publishing historical documents and studies, a sort of model for the great Novikov. He did, however, publish the "Monitor Warszawski" till 1764. The press ceased at his death. Books of 1756 to 1784 are cited.

Michael Groell is an important publisher who became a printer in 1778—in Marienburg and Warsaw. One book is recorded as printed for him as publisher in 1768 by Hartknoch at Riga. His career as printer seems to have stopped in 1794, and his whole stock is sold by auction in 1806.

Soon after 1772 we find the press of the Corps of Cadets, which was managed by P. Dufour. Then we have a press of the Section of Government Instruction, which is merely a name for the ex-Jesuit press during 1784-98.

The press of Piotr Dufour, starting in 1775, is famous, and in 1786 he had a privilege for "avisy." From 1784 to 1790 he printed Russian Old Believer books for Michael Soloviev, with the imprint *Arshava*. Rakowiecki bought the remains of this Slav type and

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printed the "Pravda Ruskaja" with them. Dufour's successor in 1795 is Tomasz Lebrun, whose widow married Leszniowski, editor of the "Gazeta Warszawska," and carried the firm with her. After Leszniowski's death she and her son, T. Lebrun II., are proprietors.

About 1789 Jan Potocki founded the Druk. Wolna, which lasted to 1812. It passed to Wyżewski and the editors of the Correspondent of the "Warsaw Gazette."

A press with no known owner appears in 1793 by the name of Druk. za nowomiejską bramą.

In 1790 Piotr Zawadzki founded a press with a foundry, which lasted till 1808.

The press of Ragoczy is only just eighteenth century, but is of interest because Ragoczy was son-in-law of Groell.

Then we have the press of the Missionary Priests, founded before 1781. This is the last eighteenth-century press at Warsaw.

Three towns of importance deserve a better historical fate to settle their priority. These are Kiev, Lissa (Leszno), and Słuck. As to the last Possevinus (1581) mentions a book press there, but our earliest known books are of about 1674, and it is a Protestant centre. No activity in the eighteenth century is asserted.

Lissa is a centre of the Bohemian Brethren, whose school, founded in 1555, is famous for the active control of Komensky, who is said to have set up the press of Daniel Vetter, about 1635. But then we have evidence for one Wigand Funcke (whose identity is rather a puzzle) printing there in 1635, and we have

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a confident assertion that the press was set up by Alexander Ujezdecký, that is, in the sixteenth century. This press went on under the Brethren till 1655 under various managers. After being closed then it reopened in 1669 as the property of members of the Helvetic Church till 1716, but was controlled by the great Polish Synod of the Unity till the rise of the Pressers. There was a fire in 1707, as a result of which Held, the then manager, went away to Silesia, abandoning the press. In 1716 he sold it to Michael Lorenz Presser, who ran it as owner till 1756. There was a regular dynasty of Pressers till 1793, with one rival Presser about 1780-90. The Widow Presser gave her press for the rebuilding fund of the Lutheran Church, and K. W. Mehwald bought it and worked it till 1798, when he left for Kalisz, and the press was not revived for some time.

The first press in Kiev was that of the Orthodox Monastery, whose printing career began in 1619, naturally with Church books in the Kiev recension, but quite early educational books in Ruthenian and White Russian, as well as a variety of Polish and Latin works, were added from 1645.

There is a curious story of short-lived rival presses set up by bishops, Uniate and other, and in the second Orthodox Church of the city, as well as of rivalry with Lemberg and Pochaev, and latterly with Moscow (which won its decisive victory on the eve of its own suppression).

At least, despite disastrous fires and great troubles, the metropolis of Russian Orthodoxy led an active and mainly successful printing career, while Poland was undivided and held a simulacrum of itself till the

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end of the eighteenth century. The next town that we can record, and the last, is Königsberg.

The Academy or University was founded by a Royal privilege in 1543-44 and Polish was meant to be its language, and the staff were predominantly Polish till the end of the eighteenth century, up to which time also Lithuanian studies flourished. The Charter was confirmed by Sigismund Augustus in 1560. The first press in the town is that of the Academy, founded in 1543. The first printer is Jan Weinreich, of whom a somewhat inconsistent tale is told. He printed two sermons by J. Brisman in 1542, while it is stated that the first book printed in Königsberg was Bishop von Polentz's sermons in German, printed without name or date. Weinreich died between 1552 and 1558. He printed some famous Polish and Lithuanian books besides some German ones.

Their next printer was Hans Luft of Wittenberg (*not* Marburg), who received the privilege on May 29, 1549, while books of his "heirs" appear in 1549, though we know that he went on living at Wittenberg till 1584. The next was Alexander z Aujezda, Behm, the well-known Czech printer mentioned in connection with other presses, at Szamotuly and Lissa. He printed Seklucjan's New Testament here.

The next is J. Daubman, who was appointed printer to the Academy in 1558, and had already printed books here in 1554, though he only got his privilege in 1561. His heirs appear in 1574.

Their fifth printer is Jacob Osterberger, from Franconia, who, however, signed his books George in at least two cases. He was son-in-law of Daubman, and got the press in 1575 and increased it. He got

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his privilege in 1585 and a larger sum from the University in 1595, dying in 1602.

The sixth is Boniface Daubman, son of J. Daubman. He carried on the business from 1602 to 1624 with the aid of George Neyke and Johann Fabricius or Schmidt. The last was son-in-law of Osterberger and seems to be in a rather independent position, being recorded as reprinting a Daubman book in 1615. Lorenz Segebad introduces complications, for though he is seventh printer to the Academy, his widow starts a fresh tradition. He was at Königsberg in 1623 and made a contract for the Academy's work next year, got his privilege two years later, and died in 1638.

The eighth printer is Johann Reusner from Rostock. He took over the press in 1639, got his privilege in 1640, and died in 1666.

Friedrich Reusner got the right to succeed his father in 1663 and took over the press in his father's lifetime, winning the title of printer to the Court and Academy in 1665, but died in 1678, leaving his press to his heirs. They and his grandson Johann Friedrich (privileged in 1738) carried on the press till the latter's death in 1764. He seems to have been succeeded by Hartung of the third press in the city.

The second press is that of Segebad's widow, who carried on a press apart from the Academy by Electoral privilege of 1639 till she married Pasche Mense in 1646.

Mense got a new privilege in 1646 and printed in conjunction with his stepson, Joshua Segebad, till a great age. The third holder was Jacob Reich, professor of Rhetoric, who bought the press from Mense

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and died in 1696 as Rector. In 1697 the privilege for this press was given to the widow of Johann S. Lange. Hieronymus Georgi received the privilege for this press and held it till his death in 1717. J. D. Zaenker bought the press after Georgi and held it till his death in 1727. The next holder was Gabriel Dreyer, till 1739, when he was succeeded by M. E. Dorn, the last holder named.

The third press was founded with a Royal privilege by J. Stelter, from Stettin, in 1713. In 1730 he encouraged his man Hartung to found a new press, which failed. Then Hartung became a partner, and remained so till 1733, when his father-in-law, Stelter, died. In 1734 he received the privilege. There is some confusion here between Johann Heinrich Hartung, printer and bookseller to the Electoral Court (*ob.* 1797), Johann Friedrich Hartung (named in 1791 as a German poet and in 1753 as Court printer to the Academy, presumably father and son), and Gottlieb Lebrecht Hartung, who was printing in 1793. At any rate this ends our history of this press and suggests a reason for the seeming cessation of the Academy press.

Our fourth and last press is that set up by the binder Philipp Christoph Kanter. He bought the Langenfuhr press of Bazil Korwin Kwassowski and presumably brought it from Danzig to Königsberg. He received the privilege for this in 1736 and was succeeded by his son Philipp Jacob. He was, in his turn, succeeded by Daniel Christoph Kanter, who was working in 1802.

One may add that there is record of Zaenker printing in 1714 and of an otherwise unrecorded press

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of J. G. Haberland and G. L. Hering in 1800, and of one Driest printing a Bunyan in 1764.

Note the important difference between a Royal (Polish) privilege and an Electoral (Prussian) one.

In 1764 there were eighty-three presses in Poland, there being fewer presses in Cracow than in 1501. There was some revival later.

BOHEMIA.—Whatever may be the truth of the claim to a pioneer position in respect of xylography, Bohemia cannot as yet claim an earlier position as a book-printing centre than Poland, though the tempo of discovery of fifteenth-century works is very rapid now in Bohemia, and the intimate links of Bohemia with Luxemburg and other Low Country towns (to which of course Mainz, Cologne and Strassburg belong) suggest a very early introduction of printing.

We must mention the press known as Klein or Neu Troyga and claimed as belonging to a suburb of Prague, only to dismiss it as more probably an Alsatian press, perhaps rightly assigned to Kirchheim's, whose castle (built by Dagobert) was called Neue Trojga or Klein Troyga. It should be added that the French character of the type and the peculiarities of the dialect (on which Mr. M. Spirgatis is unconvincing) do not necessarily prove the case for Kirchheim and against the Prague suburbs.

Further note that the great printer Sensenschmidt—despite his career in Germany—came from Bohemia and was by no means an isolated instance.

It should be noted also that there is surprisingly respectable authority for the supposition of the Bohemian origin of Gutenberg, though this is not

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aided by confusing him with Fust on the ground of the local Faust legend.

Further, Arnold Pannartz of the Subiaco press is stated to be a born Czech.

At any rate the first known press in Czechoslovakia (the lands of the crown of St Václav) is that of Pilsen, dated from 1468, the next that of Prague 1478, then Vimberg 1484, and Prague began its long career as a Jewish printing centre in 1513.

It is not timely to discuss the channel by which printing entered Bohemia, except to say that the earliest work is superior to that of Pfister associated with the earliest Polish work.

The first Pilsen printer is in any case anonymous, but it is clearly probable that he was a travelling printer. He used seven kinds of type, one book being in one of each of the first five kinds, and several books being in the other types. The first-named Pilsen printer appears in 1498, and it is to be noted that Prague's press was then twenty years old. This printer is Mikuláš Bakalař, Nicholas the Bachelor, and got his degree at Cracow. He served the Roman Catholic side, and his press ran from 1498-1513. His surname is given as Stětina in the book about the articles of the faith printed in 1510.

From 1526 a Czech press was run at Pilsen by Jan Pekk and Jan Mantuan, who came from Nuremberg, where they had issued "Enchiridion seu Manuale curatorum" in Bohemian as well as Latin in 1518. Mantuan's other name is Fentzl, and he was an alumnus of the press of J. Stücks, at whose press he printed a work dedicated to the abbess of the nunnery on Hradschin at Prague in 1520.

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Their first joint work at Pilsen was Erasmus on the Lord's Prayer, and then Pekk is alone.

The last known Pilsen printer before the eighteenth century is Tomáš Bakalář, who printed the "Hortulus Animæ" in Bohemian in 1533, the last Pilsen book of the sixteenth century.

The first eighteenth-century printer is Josef Šňupka, who printed in 1712 "Grundlich historische und geographische Beschreibung des Königreichs Böhmen." We may conclude that the thick darkness of the period "after the White Mountain" still prevailed too much, for we know of no other book by him, and our next printer only appears in the period 1760-70. This is Josef Morgensänter, who died in 1816.

I venture to hint at some interesting points raised by the detailed description of the "incunables." (This term includes books down to 1526 at least.)

Thus the "Kronika Trojanská," which some perverse students have claimed for Germany, is dated confidently as 1468 by Koráb, while others put it down to 1475.

Then the "Statuta provincialia Arnesti" (*i.e.* of Ernest of Pardubice, Archbishop of Prague) of 1476 has in its colophon "de impressione nova." Does this mean that the work of 1476 is a reprint, or that the art of printing was still so new to the public that the adjective *nova* is appropriate and a different sense must be attached to the whole phrase?

Note that two liturgies for Prague use are printed at Pilsen, one in 1479, the year after the new press of Prague was set up.

Koráb suggests that Mikuláš Bakalář and not the travelling printer dear to Dobrowský printed all the

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anonyms. It should be noted that the printer calls himself a German in his first signed book (1498), though he might still be a Bohemian citizen.

Much more is known of his methods in the Breydenbach, where he is translator as well as printer, than Koráb had at his disposal.

It is interesting to find two Bogomilian books here. Prague is the second city, and we begin here too with a travelling printer, responsible for the "Artykuly panů pod Obojí," now lost, of 1478. He was a Czech or Moravian. In 1478 the following native travelling printers were at work: Matěj z Olomúce, Valentin z Moravy, and Matěj z Moravy. The first fixed press, previously held to be the first press of all, was established in 1487 by Severyn Kramář, Jan Pytlík, Jan od Čapův and Matěj od Bílého Lva. This company produced the whole Czech Bible in 1488. The press was probably in the house of Matěj, and it passed in 1520 into the possession of Mikuláš Konáček z Hodiškova, who had combined with Jan Wolf, the Moravian, to start a new press in Prague in 1507. In 1512 Wolf separated and printed as Jan Moravus, not for long. In 1514 Konáček began his chief work. As often, he was editor, compositor and printer too. He printed the first Czech newspaper in 1515. In 1520 he transferred his business to the Bílý Lev, and dropped the use of his own name. He died in 1546.

He had a contemporary in Jan Šmerhovský, 1513-19, who combined printing with the charge of the weigh-house.

Also Severyn Kramář's son, Pavel Severyn z Kápi Hory, flourished 1520-50, producing many Lutheran books.

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The great tradition of the Jewish press was set up in this period by Gershom Cohen ben Salomo (1513-65), who is the head of a clan of printers, and set a very high example. His family went on printing till the end of the seventeenth century. The press went on, using the contraction "Kaz" for K(ohen) Z(edek) as the name of the establishment even in the eighteenth century (1764). Another important Jewish press is that of Lemberger (Abraham Heide) of 1585, when also one of the Gersonides set up an independent tradition of his own after a stay in Venice. In 1784 the two Gersonide presses were united, presumably to meet the competition of Gentile printers. (Elsenwanger, Sommer, Strašipirka, Scholl are named as Gentile printers of Hebrew books then.) The compositors trained in the Hebrew presses named above went even to Polish and German establishments all through the period.

Of the brilliant Prague printers of the sixteenth century there is only space to mention a few. Dr Fr. Skorina was printing here in 1517-20, and has been dealt with generally elsewhere.

Then one should name Jan Kosorský z Kosoře (1537-62), who printed Münster's "Kosmografia" in 1554, the greatest Czech book of the century.

Jiřík Melantrich Rožďalovský z Aventina (1552-80) is one of the learned and highly distinguished printers. Besides the Bible in Czech and classical works he printed Bohemian books. He was a pupil of Jan Günther of Nuremberg.

His only rival is Daniel Adam z Veleslavína, who was working somewhat later, viz., 1576-99.

There is a very numerous company in the seven-

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teenth and eighteenth centuries, and they show the decline of the "pobělohorská epocha" and the beginnings of the revival under Joseph II.

The intricate relations of the printers in Slovakia with Hungary and Roumania in the same period were conditioned by the fact that Bratislava was the coronation capital of Hungary, and that Transylvania was a promised land for everybody but its native inhabitants.

The Vimperk press of Johann Alakraw, though genuinely Bohemian, was only for Latin books, and is rather out of the main current even for Latin books in Bohemia. It begins in 1484.

Kuttenberg is later, being started by Martin z Tišniova (*i.e.* from the fine town of Tischniow), a scribe, in 1489. It is hard to believe the date of his activity as a scribe (1443).

This man produced the great Czech Bible, the only fifteenth-century book there. His university career at Prague runs from 1489 (Bachelor of Arts) to Dean of the Philosophical Faculty (1495), and Examiner (1497).

Czech correctors worked on the Bible published at Venice in 1506 at the press of Peter Lichtenstein.

The Brethren founded a press at Jungbunzlau in 1500, and, though they founded many presses in Bohemia, they printed much abroad, apart from the exile press in Poland.

The press was revived after 150 years here by Frant. Stranský in 1748.

Leitmischl is not far behind (1503), being first set up by the Prague printer Pavel z Meziřící (or Olivetský). There is no long break in printing here.

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It is noticeable that the successor was Alexander Aujezdský whom we found at Königsberg and in Moravia and at Szamotuly.

He printed the famous Slovene Janissary's book in 1565 at Leitmischl, in Czech, presumably finding it in Poland while in exile there.

In Bohemia also there are a number of private and semi-private presses all through the period.

The eighteenth century showed its spring-like character by starting presses in the provincial towns not previously favoured, *e.g.* Příbram 1712.

Oddly enough Sensenschmid's town of Eger only began to print in 1808, being preceded by Kodaň (1773) and Klatovy (1789).

Brünn and Olmütz, in Moravia, both had important fifteenth-century presses, and the province generally was very active in the whole period, with fewer gaps than in Bohemia proper.

The Czech element in Silesia was also very active in printing, and fresh presses were founded in the eighteenth century, especially Trautmann (*c.* 1740), who printed the *Biblií Halská*.

I have unfortunately been unable to use the first tolerably complete work on Bohemian printing (Dr Volf) and its almost equally valuable criticism by Dr Tobolka.

Nor could I use the very detailed information about Slovakia owing to this intertwining with the history of the Hungarian press.

JUGOSLAVIA.—The area covered here is less familiar ground than Poland or Czechoslovakia, so it is well to name the constituent provinces, premising that

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exiled printers and presses must come into the reckoning here. This implies Venice. The geographical names of the provinces are: the Küstenland, Dalmatia, Croatia, Slavonia, Slovenia (*i.e.* Carinthia, Carniola, Styria), Bosnia-Hercegovina, Montenegro, Brda and Serbia, and some parts of the border provinces of the Banate of Temesvár and Macedonia. The earliest date found is 1493, apart from Jewish presses at Salonica, etc.

Oddly enough a recent writer dates the Glagolitic press at Venice back to 1483 while treating the Glagolitic Chasoslov of 1493 as Cyrillic in the usual perverse way.

Here we must state that the normal types used in this area as native are more numerous than in almost any other. Apart from the ordinary Roman known in the West, Gothic also known in the West, and the two principal forms of Hebrew type, all to be considered as native, we have the Cyrillic of the Orthodox Church, the Glagolitic script which took its place in Roman Catholic use, without being unused by the Orthodox, and the latest developed, the latinica, a combination of the Roman script with some special forms made by diacritics. All these were in use before the introduction of printing. A very efficient book-production in manuscript form, and the very wide nature of the trade of Ragusa and other ports bringing many printed books, resulted in the printing press developing slowly; besides this it was hampered by the Turks.

Venice saw very early production of books in Yugoslav (Glagolitic script), and the earliest printed book on the area appeared there. But the date of the earliest books certainly printed in the Yugoslav

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area is 1493-94, shared between two towns, Zengg and Cetinje.

At the former we find Glagolitic breviaries and missals printed from 1493-94-1503 by one Grgur Senjanin, *i.e.* Gregory of Zengg, "who had come from Venice for this express purpose." The connection of these books with those issued by Andreas Torresanus (a 1493 Breviary at Venice) and his association with Gregorius de Gregoriis Dalmatinus seem to assure us that this must be Gregorius de Gregorius despite the epithet "of Forli." At any rate here we have the first press of Glagolitic type in Jugoslavia associated with the names of Blaž Baromić and others.

Then again the monk, Makarije, in the monastery of Cetinje (not Rijeka Arsenojevićeva, nor "Obod") cut and prepared Cyrillic type, and there printed four books at least. The rest have the place named in the colophon, but the earliest, the "Octoechus," has not, and is sometimes assigned to Venice on the ground of an alleged similarity to the Venice "Book of Hours" of 1493, but the latter is in Glagolitic, not Cyrillic letters, and the type of the "Octoechus" is more closely associated with the East. The name Makarije recurs in connection with some similar work done in Roumania.

The subsequent history of Montenegrin printing is to be found in the exile presses at Venice of Božidar Vuković and his successors. Towards the end of the eighteenth century printing was revived at Cetinje on a very small scale. Zengg does not seem to have had a fresh press till well into the nineteenth century.

Besides Venice, Vienna shows early Jugoslav printing among foreign towns, as it has a "Thomas à

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Kempis" of 1529, and goes on printing Yugoslav books in all scripts to the present day.

A really fresh start in Belgrade is the press founded by Knez Radiša Dmitrović and carried on by Trojan Gundulić of Ragusa with the aid of Mardarije of Mrkšina Crkva. This press is about 1548 to 1552 (in which last year we have a book finished by Gundulić).

Mardarije took some of this type and went back to Mrkšina Crkva (which was on the borders of Montenegro), where he finished a Gospel in 1562.

Mardarije's "Triod Cvetni" of 1566 was printed by the help of Živko and Radul, and it is suggested that this was at Kosjeriće in the diocese of Užice.

Meanwhile the Ljubljana refugees had begun their work with the help of Morhard in 1551 in Tübingen and started the Urach press about this time, *i.e.* 1561. This had a distinguished career, but was closed at the death of Baron Ungnad, its patron. The type passed on in 1634 by the gift of the Emperor Ferdinand to the Propaganda at Rome, and was the model for their type to the end of the eighteenth century.

Stefan of Scutari had worked at the press of Vicenc Vuković at Venice, where he produced the first part of the "Triod Cvetni," in January 1561. Part II. he did in 1563 at his native Scutari, where he had in the meanwhile set up a press, with the aid of Camillo Zanetti.

Oddly enough the earliest authentic date for Ljubljana (Laybach) is 1561, Jan Manlin (or Ivan Manlin), set up by Truber. Other printers there are Janes Mandeljac about 1579, J. T. Mayr 1687, and our last Yugoslav entry is 1741. But the principal

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publishers began business before this and they became printers in the late eighteenth century.

Rudoff Hoffhalter in his wanderings also came into this area in 1574, at Nedelišak, a place not now traceable. One unnamed printer is at work in 1573.

Gratz and Gradisca have been sometimes confused with each other and with other places ending in gratz, grätz. A book supposed to be 1488 and at Gradisca was not 1468, but much later and at Gratz. This might come in if the misunderstandings could be cleared up. Cotton states 1536 as the date for printing at Gradisca, but this seems to be a mistake. The "*Vocabulaire Slovène*," cited by Deschamps, was printed at Gratz by the Widmannstadts in 1670, an early date for them. The earliest dated printer is Joannes Faber 1592, presumably Johann Schmidt.

The earliest recorded date of the Widmannstadt press is 1670, and 1752 the latest. It is tempting to associate with them the Fr. Vidmanstetter of 1662. The last Yugoslav date is 1768, with no name of printer.

Antonio Turrini introduced printing in Trieste in 1625 with the statutes for his first book. We have a note of books printed by him in 1629, and he died in 1645. He had printed a pamphlet at Capodistria in 1622, but after 1645 Trieste has no press till the Venice Mechitharists set up their Greek press here (1776-1810). In 1796 we have a German book printed there, presumably a part of the known general revival and perhaps by the Gaspar Weiss who is at work in 1812.

Two more foreign towns require mention for a fairly considerable output of Yugoslav books; these are Loretto and Ancona. The Serafinis, who print

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at Loretto (1633-49), came from Ancona, where their chief business was. At least one book with their Loretto imprint was probably printed at Ancona.

Ancona, whose general printing career begins in 1512, began to print Croat literature, principally Ragusan authors, in 1633, and went on till 1782 at least. The printers are the Serafinis, Ferri, and Nic. Belleli and their heirs.

The Croat capital, Zagreb, has a long and distinguished printing career, beginning anonymously in 1690 as far as Yugoslav books are concerned, and continuing to now. The earliest name is J. B. Weitz or Weiss, running down to 1750, his widow succeeding in 1751. The next important name is that of Anton Jander, who is agent for a predecessor's widow first, and then head of a firm himself: his dates are 1767-77.

Then comes J. K. Koetzsche and his heirs, from 1773-99. In 1773 we hear of Novosel's press, and in 1795 the press of Antonius Novosel is named. It ran on into the nineteenth century. Parallel with this is F. J. Trattner (1775-94) who had a Budapest branch in 1810.

The bishop's press is presumably that of the Jesuits (1795-96).

Ragusa is supposed not to have had a press before C. F. Occhi set up in 1780, but, apart from the Bocignolus pamphlet of 1524 and Melzi's Genevan pamphlets, there is a book composed by one P. F. Martecchini in honour of a bishop of Scutari, bearing the imprint of 1737, and a Pravovierstvo starih of 1704. These may have been done at Scutari or Venice, but it is doubtful. The known printers are Carlo Antonio

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Occhi, Andrea Trevisan, and then Ant. Martecchini (after 1800).

Places like Klagenfurt and Wiener Neustadt, despite considerable importance, had better be omitted here.

One Zaharije Orfelin, who was chancellor of the Uniate diocese of Carlowitz, printed Serb books at Carlowitz from 1757-76. This is a fresh start, and Carlowitz does not seem to be printing anything earlier, unless some references to Karlstadt in Kukuljević mean the same.

At Zara the first printer seems to be Domenico Fracasso (1774-1802), but he was working at Venice in 1795. His reputed immediate successor is Antonio Battara, who was already printing Jugoslav books in 1800. Another late beginning was made by Essek (Osik), whose printers were of the family of Divald, from 1776-1810. Apart from a doubtful case of 1531, the earliest record is of J. M. Divald in 1776, the latest of M. A. Divald.

Cattaro seems not to have had a press before 1802, and even that is doubtful. Though there is no eighteenth-century record for Split (Spalato), yet one Ragusa printer is said to have come from Split.

Fiume (Rijeka) has two periods: the early one in which Simun Kožičić, Bishop of Modrush, had books printed in Glagolitic in his house (1531), of which two are now known, and the later, when L. A. Karlecki reintroduced printing in 1790. He died and was succeeded by his daughter Rosina in 1800.

Though in Friuli one must mention Cividale, as it has Slav names, Staro Mesto, Ciudad, which has a printing press in the fifteenth century and has

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it reintroduced in 1765. But it has a Goritian as second founder (Valerio dei Valerj), and it is easily confused with the Ragusan Ciavtat and with the similarly named places in other Slav lands as well as with Gratz and Gradisca.

It is interesting to find the Bosnian script used at Venice independently of Postel, though later.

ROUMANIA.—The area here is that of greater Roumania. Owing to the chequered history and the violent changes in control of different parts of the territory, it is one of the most interesting areas to study, for so many vernacular languages occur, and the different ethnic elements get their training in quite different places abroad, with an astounding variety in the resulting product of the Roumanian press as a whole.

Whereas Popp, the first authority on the Roumanian press, put the Transylvanian press of Johann Honter at Kronstadt (Braşov, Brassó, Corona) first, it is now clear that Tîrgovişte is the first town to produce books regularly, and its press is definitely linked with the fifteenth-century press of Makarie of Cetinje in Montenegro. The first book known to have been produced at Tîrgovişte is the Slavonic Liturgiaron of 1508, printed by Makarie, whom it is quite reasonable to link with the printer of the Cetinje Octoechus, though the later dates of this press seem less plausible.

Two years later we hear of a Slavonic Octoechus from the same press, unknown to Bianu and Hodoş. This is interesting, if true, for we know of a second part for the Cetinje book being printed by one of the Serb presses at Venice, and this would be a fresh

Roumania

attempt in a new area by the same printer. The next Slavonic Octoechus we hear of is much later, 1535.

It is to be noted that *Tîrgoviște*, like Bucharest, is in Wallachia, the *Ugrovlahia* of this period. The third book of this press is a Slavonic Liturgical Gospels in 1512, which was the model for the Kronstadt one. There is at least one book dated 1521 from the anonymous press of "*Ugrovlahia*" usually considered to be *Tîrgoviște*, though not noted by Bianu and Hodoș.

There is now a gap, one of many in this country. We come to Popp's first press, that of Johann Honter of Kronstadt, Transylvania. In this country (*Siebenburgen*) twenty-six presses were founded by the Protestants in the sixteenth century.

Honter was born in 1498 in Brașov, became Master of Arts in Cracow in 1530, and lectured in the *Con-tubernium Ungarischer Nation* there, where he published two books. Then he went to Switzerland and published more of his own books. He was at Basel in 1532-33, whence he was recalled. When he returned to Kronstadt in 1533 he brought presses and trained pressmen. At the end of 1534 he began to print. Most of his books were in Latin. In 1546 a paper-mill for this press was founded. When one adds that Honter laid down the principles ultimately adopted with the Reformation in Kronstadt and in Transylvania generally, and that he became *Stadtpfarrer* in 1544, his great activity as a printer right up to the eve of his death in 1549 is the more remarkable. His book-production, including works of his own authorship, was very varied, educational, moral, religious, legal books all abounding.

His successor in office, Valentine Wagner, did some

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printing, but not much. Yet he does a Greek New Testament in 1557, and in 1550 a Luther's Catechism for the use of the Greeks. He is the first to use Cyrillic letters, though not orthodox. In 1562 he printed a Serb Gospel at Johanna Benkner's cost.

The last press noted by Popp is Gött's, in the mid-eighteenth century.

Independently of the above the Deacon Coreși printed his own Roumanian version of the Liturgical Gospels in 1561, following it by a new edition in 1562 and by an Apostol in 1565. He was printing continuously from then till 1580. A 1577 book was formerly supposed to be the first book printed in Roumanian.

It is to be noted that Coreși had a colleague, Mănăil, in printing the Liturgical Gospel of 1579.

Bélgrad or Alba Julia had Latin type introduced in 1565, but it was only under Gabriel Bethlen that efforts were made to set up a press to print the Bible in Roumanian, though we find Lorint diac printing a Slav Evangeliarion here in 1579, and finally George Rakoczy established a Roumanian press in 1638, which began by reprinting books from Brașov (Kronstadt) like Ghenadie's Sermons. In 1658 the Turks came to Kronstadt and the press was destroyed. In 1668 Michael Apafi set Petr Kovașai to revive this press, and it worked till 1707. The next town is Orăștie, which Popp places before Alba Julia, though he knows no books thence.

After Alba Julia comes Saș-Sebeș, with but one book to its credit. Its press was set up by order of Prince Michael Apafi the Elder, and existed only a short time. Its only book is of 1683, according to

Roumania

Popp. But strangely enough Bianu and Hodoş show a Slavonic Sbornik printed there in 1580 by Coreşi, in addition to some verses of his printed without place. He is printing in Kronstadt later in the same year, while his Paliia was printed at Orăstie by deacon Şerban and diac Marien in 1582. Şerban was Coreşi's son, and usually prints at Kronstadt. It is noteworthy that the Liturgiaron, dated by Picot as contemporary with Macarie about 1520 and by Bianu and Hodoş about 1550-70, has a vjaz with the monogram of Božidar Vuković, and other features linking it with Şerban's similar book of 1588.

Hermannstadt (Sibiiu, Nagy Szeben) saw the introduction of printing in 1575, but the first Roumanian press was very late. Yet we are told of a book by M. Gemmarius printed there in 1529, and another by Sebastian Pauschner printed in 1550.

In any case there is a big gap in the production of Roumanian books from 1583 to 1635, and the first book printed here after this is a Chasoslov (Horologion) of 1696, printed by Chyriac and his pupils.

Then there is another gap followed by a Roman Catholic Catechism in Latin letters, 1709, repeating the Tyrnau edition of 1696. Another gap, followed by an Ode on the death of Maria Theresa in Latin letters in 1781 by Martin Hochmeister, who printed an Abecedar in 1783. In 1784 Petru Bart prints a Roumanian book similarly. In 1786 Pustia dragoste is printed for Hochmeister's wedding. In 1788 P. Bart printed a Roumanian-German A B C. Next year he prints the book noted by Popp just after that of 1696. He printed to the end of the century. He was succeeded by a Joan Bart and another Hoch-

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meister. A Martin Hofmaister appears in 1797, being probably Hochmeister.

Printing began in Cluj (Kolozsvár) in 1545, but not in Roumanian or Cyrillic. Apart from refugees, who occasionally printed Roumanian books, *e.g.* Kértész and Totfalusi Kis (whose work lay in Hungary mainly), the first permanent Roumanian press was set up in 1703 on the acceptance of the Union by the Metropolitan Atanasie of Alba Julia. The Jesuits moved their press from Alba Julia to Cluj in this year 1703 and remained till 1744, when it was removed to Blaj, where it remained till after 1820. Two books of the Cluj press were known to Popp. Blaj (Balaszfalva) came next, but its press dated back to before 1702.

Curiously we find that Campulung, in Bessarabia, had a press much earlier, in 1635, called tipogr. domnescă, and its printers were Timoteiu Alexandrovici and Ioan Glebovici. A different press and printer appears in 1643.

There was a short-lived press at the monastery of Govora, whose printer was Meletie, its abbot. It dates from 1637 to about 1652, when it is supposed to have been removed to Tîrgovişte, from which books went on coming.

At Tîrgovişte, according to this view, Greek letters were added and Greek books were then printed there, this particular press lasting till 1716, while others went on to the end of the century.

The next town to begin a press, comparatively late, is Jassy. Vasile Lupul set up the Roumanian and Greek printery, tip. Domnesca, in 1640. In 1650 a second was founded in the monastery of the

Roumania

metropolitan, and this lasted into the nineteenth century.

In 1750 Ducă Stoicovič appears ; though supposed to prove a third press, he may be merely holder of the lease of the press. Russian civil script type was acquired in 1795 by the Tipogr. Metropolitan, after which there are no books till 1803.

Another monastery, that of Delî, makes its appearance with a press next, 1644-47.

A short-lived press at Uniev, in Russian territory, lasted from about 1672-75.

Then about 1675 Bucharest began its career, though the earliest recorded book is of 1678. About 1740 it fell into decay and was renewed by Metropolitan Neofit in 1742, when it was called the press of the School of Bucharest. From 1793 to 1819 it was in the hands of Epirots from Janina, etc., and was practically a Greek press, a new printery having been specifically set up for this purpose.

A very active press was established at Snegov, or Snagova, monastery by Costandin Voda Brancoveanul and Antim Ivireanul, the abbot, a Georgian. Its earliest recorded book is of 1696 (a year earlier than Popp's date), just a year before the earliest recorded book from the monastery of Buzeu, also an active centre, established in 1691.

It should be noted that Antim Ivireanul also printed at Bucharest and elsewhere, even at Rîmnic. After about 1702 he is nearly always at Bucharest. But it is stated that Antim established a press at Rîmnic after he became bishop there in 1705. It lasted till 1787. He trained the first printer in Georgia, a Roumanian, who used type cast by a

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Hungarian typefounder who was for a time in Cluj, and also printed an Arab-Greek service book, the Arab companion volume of which appeared at Aleppo with a dedication to the Roumanian patron of Antim and the Syrians of Aleppo.

A Roumanian press was set up at Radautz, in Bucovina, in 1744 and lasted for a few years; it removed to Czernowitz in 1777 with the bishop. A press was set up in Temesvár in 1790.

RUSSIA.—For reasons which there is no room to discuss now the area meant here may be defined as that of the Union of Socialist Soviet Republics, excluding the Ukraine.

It seems clear that the invention of printing was not regarded unfavourably in Russia, for we have negotiations for the establishment of an official press at Moscow set going as early as 1492—from the Muscovite side. What is clear is that under Ivan IV. the press was set up in 1553 in the new house for preparing the official seals. Its head was Ivan Thedorov, aided by Petr Timofěvič of Mstislav. The official first book was begun in 1563, and only issued in 1564. This was the Apostol, or Liturgical Epistles and Gospels in Church Slavonic. They may have printed other things than books before this. Their next dated book was the Horologion of 1565. There was a Gospel without place or date issued between 1564 and 1568, possibly between the two dated books. But besides this there was a Psalter and a Triod Cvětnaja dated 1562. There are other earlier books still, and it is suggested that there were private presses at Moscow already. This is

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quite likely and harmonises with the long history of private presses in the wider area of the Russian language. With printing engraving is also officially introduced. The press and types probably came from Poland, *i.e.* the Republic. The mob was roused by some dubious agency and burnt down the Pečatny Dvor, and the printers saved themselves by flight, mostly to Poland, though some went to Novgorod, whence the engraver had come. In 1568 new printers were set to work at Moscow in a new Pečatny Dvor, viz., Nikifor Taras'ev and Andronik Timofěev Nevěža. In the great fire of Moscow in 1571 the building was again burnt down and printing ceased in Moscow for twenty years. Andronik Timofěev went with Ivan to Aleksandrovskaia Sloboda and set up a small printery, printing a Psalter there in 1577. So ends the first period of Moscow printing.

Under Tsar Theodore printing was revived in Moscow in 1584 by Andronik Timofěev, with Triod Postnaja, 1587-89. This press has a continuous record till 1598, when this printer's son, Ivan, is named. He is not named in the Mineja Obščaja of 1600, which mentions Andronik.

The record is continuous, Ivan appearing alone from 1604, even through Demetrius's time. Ivan began to print the Mineja Služebnaja, but Anikita Thedorov Fofanov finished it. He had set up a new press at Šujski's request. Another printer of this time is Onisim Mihailov Radiševski. He came from Ivan Thedorov's press at Ostrog with new types. He is at work about 1610. Fofanov, the last of the Moscow printers, fled to Nižni Novgorod after the destruction

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of the Dvor in 1611, and started printing a Psalter, but its fate is unknown.

After Prince Trubeckoi's attempt to set up a press at Moscow, Fofanov was called from Nižni and, with help from Kondraty Ivanov and Sofiiski pop Nikon, re-established the Moscow press. On 5 (18) June began the printing of Učebnaja Psaltir, the first book printed under Michael Romanov. In this reign 180 books were printed, the first public library in Russia, the Synodal one, was opened and the first gazettes (in MS.) were made. V. Burcev's Bukvar jazyka slovenskage, 1633, 1637 was the only exception to the theological character of the books issued. Alexis added secular printing to its functions, and continued to print educational manuals. It is usual to credit Peter with reforms due to his predecessors, and here too the translation of Walhausen's treatise on the art of war has arabic figures in the text—genuine cut type—to refer to the diagrams printed in Holland. This was printed in 1647, issued in 1649. The average production of the press under Alexis was six books per year. More than 160 persons were employed about the Pečatny Dvor. Many Latin and Polish books were imported and were no rarity in the libraries of the boyars, while Kiev books were also imported, especially after the Kiev press had opened a shop in Moscow.

This is the period of the Nikon reforms, which, like the earlier ones, led to great printing activity, *e.g.* a Nomocanon appeared in 1650 and a new edition in 1653. The Rai Myšlennuy (1658) was printed in the Iversky monastery with Nikon's arms, while secret presses issued Old Believer books. In 1676–82 (Theo-

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dore's reign) the Pečatny Dvor issued 150 works, all religious. In 1679 a school for correctors was set up. In 1682 appeared the first Russian commercial arithmetic, and Silvestr Medveděv compiled Oglavlenie knig, the first Russian bibliography, and in 1685 appeared the first Russian play, on the story of the Prodigal Son.

Peter used printing very actively in his propaganda for reform, and his early efforts concern the history of printing in the Netherlands and Germany, starting with presses set up by Peter at Amsterdam.

Theodor Polikarnov was director of the Moscow press 1701-22, 1726-31, and first used Greek and Latin types in his Bukvar slavenskimi, grečeskimi, rimskimi pismeny učitisja hotjaščisja . . . (1701). In 1707 three new founts of Russian type were brought into Russia. Mihail Efremov began casting from this graždansky type this year. The first book in the type is a quarto geometry, 1708. By 1710 it was worth while to issue a printed advertisement of the fifteen books printed in the new type.

In the early period the thing was largely experimental, and there are great fluctuations. The regular use of arabic figures came in now. In the first case half the edition of the "Journal of the Siege of Noteburg" was paged in arabic and half in Slav figures.

In 1711 Peter established the first press in his new capital, under Mihail Petrovič Abramov. In 1713 the first book was printed there—"Kniga Marsova."

In 1714 more founts and workers were got from Moscow and Latin and German types from Riga (the latter nominally borrowed, but never returned or paid for). After a career in which it produced 49,000

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roubles worth of books and engravings the Petrograd press was suppressed in 1727.

A second press had been established at the monastery of St Alexander Nevsky in 1720 to print Slavonic books. This too was ended in 1727 and its stock of type, etc., sent to Moscow. It had produced twelve books down to 1725.

The printing press of the Senate was also established under Peter. This was the forerunner of many departmental presses. There was also a press printing in the graždansky type at Moscow, of which little is known. It was under Bruce and Kiprianov, and thence came the famous Brjusov kalendar, compiled by Kiprianov (1709). This is the earliest known kalendar with the year beginning on January 1, in accordance with the ukase of 1699. Many copperplate maps were issued by this press, and are rare. There was a general decline of the press after Peter's death, the journal (*Vēdomosti*) started by him being suppressed in 1727. Yet in 1751 the Kiev monks' revision of the Bible in Slav was printed at Moscow in two editions, folio and 8vo, in three vols., and the edition of Elisabeth's reign is the standard one now. In 1728 the Academy had begun to issue their *St Peterburgskija Vēdomosti*. In 1756 was the first issue of the new *Moskovskija Vēdomosti*. It is characteristic of the time, that the Moscow press on becoming Synodal in 1727 was limited to church books. Also it was decided that there should be only two presses at Petrograd, the Senate's and the Academy's. Then the Synod handed over the original Petrograd press to the Academy, and foreign type was got from Hamburg. The *Sanktpeterburgskija Vēdomosti* began

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in 1728. The Russkoe Sobranie of the Academy, founded in 1735, had to fix the alphabet, the spelling, etc., of the new script. The Academy press remained, even after new presses were founded, the chief school of typography. Thus it helped to form a graždanskaja press for the University of Moscow in 1756. One press that the Academy helped to found in 1757 issued the first unofficial periodical in 1759.

There is a long list of new official presses established with the aid of the Academy press, but the most interesting is that of a press at Astrakhan in 1763.

In 1758 a new Academy press, to print popular works for the profit of the Treasury, was established. It is noted that this marked the first use of paying for translation by the sheet. In 1766 this was merged in the old one, and as the Academy took to working exclusively on serious work, the Government began to authorise unofficial presses in 1769, the first being that of Johann Michael Hartung (for foreign books). After this came Weitbrecht (1772) and Schnorr (1776), at first in partnership and then apart. Schnorr also printed Russian books. Weitbrecht's press won the name Imperial, but Schnorr's was held to be the best in Russia at the time. Schnorr had arabic script, and printed several editions of the Koran for the Moslems of Russia.

Under the highest patronage the press expanded in Catherine II.'s reign and translation and other publishing societies were set up. By a decree of January 1783 the official character of the press ceased. Immediately about fifteen presses sprang up. This includes Novikov. A number of genuinely private presses were established in country places, like Kaznik.

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Russians abroad did the same. The number of State presses also increased. Thus the newly created " governments " also acquired presses, beginning about this time. Nikolai I. Novikov began his publishing career in 1768. This is not our affair, but he was also contractor for Moscow University press and leading spirit in more than one printing society or company. In this way his career is a great influence on the whole of the rest of the eighteenth century. He moved to Moscow and took the ten years' contract in 1779. His activities were prodigious, including the pioneer free library for reading secular books in Russia. He also had an unofficial press of his own.

The Typographic Company, founded by an older printing society which Novikov had helped to found, had twenty machines in its office.

In 1785 began the persecution of the Martinists. A first attack on Novikov was warded off. But in 1791 the Typographic Company was compelled to dissolve, most of its business having been taken away by a decree of 1787. Novikov got the effects, but did not get the renewal of the University contract, which passed to a series of short-lived controllers till the contract system was abolished in the nineteenth century.

In 1792 Novikov was arrested and put in Schlüsselburg. Paul I. released Novikov as an innocent person and restored his position as far as Novikov's pride and honesty would allow. In 1805 he tried to get the Moscow University contract, but the system was abolished. In 1818 he died.

A decree in 1796 established the censorship as pre-war Russia knew it, and led to decay in the

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legitimate printing business, though it paradoxically led to the perfecting of the technique of the strictly private "illegal" press.

The eighteenth century ended with wars, whose continuance in the nineteenth was an additional handicap for the printing press.

BALTIC STATES.—The area here meant has always formed part of all the neighbouring countries for purposes of the book-trade, taken as a whole, and special circumstances have delayed and circumscribed the development of the printing trade here. In terms of modern life we are concerned with Latvia and Esthonia, and to some slight extent with Lithuania and Finland. In terms of older geographical provinces we have Courland, Livland, Esthland, Semigallia, Ingermanland to consider.

It is to be noted that the local languages were used in print (with special diacritic marks) as early as 1553, but that no book of any sort was printed in the area before 1588.

The first press in the country was that of Niclas Mollyn of Riga, who arrived there in the spring of 1588. We know not whence he came, but his type probably came from Wittenberg. He had been called in by David Hilchen, their secretary, and the Rath. King Sigismund gave Mollyn and his heirs a Royal privilege, May 16, 1590. New Year's Day, 1591, the Rath made him its printer, and gave him and Hildebrand Gehmann a joint privilege as booksellers. As Gehmann died in 1592 Mollyn became also sole bookseller.

He had trouble with the Jesuits in 1593, when the

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Polish army was quartered at Riga, but he was protected by the King.

He got a kinsman, Reter von Meren, given a joint bookselling privilege with himself, July 25, 1597. But the bookbinders constantly sold books nevertheless. Christian Rittau in 1620 admitted printing one book, and probably printed others, though he was a bookbinder, and only asserted that he had a bookseller's privilege. So this is one more printer from our point of view.

Gustavus Adolphus entered Riga in 1625 and signed the city charter on September 25. Mollyn claimed a fresh royal privilege, which was granted November 7. Little is known of his stock in trade, but he had two presses at the start. The Rath itself bought some type for him to use, but kept its ownership. He also printed music. He never paged his books and only used signatures quite late. His total production was 160 books, few being repetitions. He was one of the first to print Lettish books, following Georg Osterberger of Königsberg in this. In 1615 Mollyn printed a Lettish handbook. He died in 1625, leaving a son Johann, and a daughter, Peter von Meren's wife. The two latter died of the plague on August 6, 1625. Rittau bought the house and books and the bookshop privilege. His house fell down and so he tried to get the Dorpat privilege in 1630. He never set up a press at Riga, and died soon. His widow married Peter Duderstedt, who ruined the business. Gerhard Schröder printed those of Rittau's books not done by Hans Wolf at Lübeck. Schröder had applied for a privilege in 1623, but was told to wait. In October 1625 he was given Mollyn's privilege on condition of

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marrying the widow. In 1626 he became a Burgess of Riga. He entered office as printer, Christmas 1625. A new Gymnasium (1631) led him to expect and prepare for an increase of work, with little gain to himself. His work was equal to the best in Germany. He also got the bookshop privilege. In 1656 Alexis of Russia besieged the town. Plague and ruin of the Gymnasium buildings in 1657 coincided with Schröder's death-year. He printed much of the Lettish work of George Mancelius, the Courland pastor. Now too there was trouble with the binders. The "gesellen" had their guild in 1635, but the masters only tried to form one in 1639—and got it later. He had a rivalry with Jacob Becker of Dorpat, who was in turn at law with Dorpat University.

After Schröder's death the Mollyns claimed the estate, and then his brother Anthony appeared and got his claim recognised.

Albrecht Hakelmann set up as printer without a privilege after 1657 and died in 1659, leaving a widow, who printed a little and published more.

H. Bessemesser came in as factor to this firm under a false impression and got into a tangle, as a release from which he himself became city printer. On September 3, 1664, he received a Royal Swedish privilege. Eleven years after Charles XI. granted a privilege to set up a press and foundry in Riga to the general superintendent, Johann Fischer, while Radetzky was setting up at Mitau. Bessemesser died childless, October 1683. Johann Georg Wilcken seems to have run the shadowy press of Jacob Becker at Riga and the practical work of Fischer's press. Fischer got a bookshop privilege in 1682. Wilcken

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is practically the printer all through 1685-99. In 1699 Fischer left for Germany and his press declined. He died in 1705. His press ceased in 1713.

In 1684 Nöller (G. M.) got Bessemesser's privilege and made Joh. G. Bessemesser his "factor," but he got no printing privilege. In 1681 the firm had got the job of printing the local "Avisen," Wilcken failing.

Nöller died in 1712, leaving a widowed daughter, who was confirmed in the printery. In 1713 she married Samuel Lorenz Frölich, who took on the whole business. In 1714 he was ordered to send his German and Latin type to Petrograd for the formation of Peter's new press there. He got back neither type nor money nor compensation. He died July 9, 1762.

On February 21, 1763, Gottlob Christian Frölich was installed as his father's successor. Later J. F. Hartknoch came from Mitau and got a bookshop concession and was a dangerous rival. In 1767 Hartknoch sold his Mitau shop: 1771 he bought a corner shop in Riga, where he was a great publisher and second-hand bookseller. In 1766 he got the publishing of the Lettish handbook, though Radetzky printed it. Hartknoch died at Riga, April 1, 1789.

Lieutenant-Colonel Johann von Fischer appeared in 1773 as heir to Jacob Fischer's Swedish privilege for a press. The Courts decided against him.

Frölich died in 1786.

In 1777 Georg Friedrich Keil settled in Riga again as an independent printer. In 1804 he sold his press and its limited right to Ferdinand Häcker, under whom he worked till his death in 1813.

Julius Conrad Daniel Müller came to Riga in 1783,

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was factor of the Stadtbuchdruckerei 1786-9, married Frölich's daughter, and became Stadtbuchdrucker in 1789. He sold the bookshop, being only a printer. He died in 1830, having raised his firm's prosperity much. In 1800 he got the privilege of Kronsbuchdrucker, which he passed on to his successor Steffenhagen.

The first formally appointed Dorpat printer is Jacob Becker, 1632-36, who came from Riga. He produced fifteen books. After him came Johann Vogel, whose date is unknown, but his first dated book is September 15, 1639. He went on till 1655. He did not often put his name to things. As a result of the troubles there was no printing here from 1656-89. The first printer after this interval was Joh. Brendeken, who may be brother of Christoph, the Reval printer. He printed twenty-eight books from 1689-99. In 1699 the press was removed to Pernau and remained there with the Gymnasium till 1709. It is not certain whether Brendeken went to Pernau. No printing for over eighty-five years at Dorpat. A bookshop was then opened in Dorpat *c.* 1785, which published a book printed by Keil at Ober Pahlen. Mitscherlich, the binder, had previously had all the book trade. In 1787 Michael Gerhard Grenzius, the printer from Ober Pahlen, came to Dorpat, to print the "*Dorptsche Zeitung*." Grenzius was printing substantial books in 1794, and became printer to the new university in 1803.

The first press was set up in Mitau in 1665 by Duke James (Michael Marndall). Only two books are known, but George Radetzky became bookseller there, and in 1684 printer. John Güntzel was a publisher

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from 1675, but only issued four books in 1675-1700. Steffenhagen was at work in the late eighteenth century.

So too at Reval, a printer was established in 1630, but between 1657 and 1687 only about fifteen books were issued. As noted, there was an eighteenth-century printer here, Christoph Brenteken. Reval had a privilege for Esthonian books. Köhler was the printer of Esthonian books there about 1740, and Lindfors c. 1780-1871. Of the seventy-six Esthonian books printed from 1553 to 1800, a large proportion were done out of the Balticum and many at Riga and Dorpat.

Much the same applies to the Lettish books from 1586 on. Hartung and other Königsberg printers cut into this business.

In 1766 a private press was set up free from censorship to print the founder's works at Ober Pahlen. The founder was Dr Peter Graft Wilde, editor of the "Landarzt" at Riga. He was chief of a hospital and veterinary school set up by the landlord here, and printed health and veterinary and other pamphlets in Lettish, Esthonian and German. Some other people's books were printed there. Thus Lange's, the first Lettish dictionary, whose proofs were read at Königsberg and Dorpat, was printed there, but the title-page and preliminary matter was done five years later at Mitau by Steffenhagen, to cover the irregularity and allow of its free sale.

In 1770 Lauw bought it and in 1772 ran it for himself. It was placed at a dairy called Königsberg. Later the press was burnt down, and we have seen the one man and apprentice, figuring as the chief

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printers of Schloss Ober Pahlen, appear at Riga (Keil) and Dorpat (Grenzius) above.

It is curious that very high authorities denied the existence of this press, though there is substantial evidence for it even in the condition of Lange's Dictionary.

Thus much for the Baltic, whose eighteenth century was but little more active than its seventeenth, for the same cause, the great wars of the period, all of which affected the Baltic.

Remembering that the arrival of a parcel of books in Dorpat was an event in 1857, the scale of things about 1790 is not surprising.

The first newspaper for the Esthonian peasants could not be issued in the Balticum, but only at Petrograd, even in the nineteenth century, though favoured by the Emperor.

TURCOGRAECIA.—The utility of this old term for the area I am at present studying will be obvious, for it consists of the present kingdom of Greece, the whole of the present Turkey in Europe, Albania, Bulgaria, and, in fact, all the Balkan peninsula outside of Jugoslavia.

It reduces itself to even smaller proportions, for Albania in the broader sense (*i.e.* including the area of Jugoslavia inhabited by Albanians now) had no printing at all before 1800. Indeed there is no printing there till much later.

For Bulgaria there is again no printing before 1802, the only early piece of modern Bulgar being in the Paulician dialect and strongly coloured by a Slovené corrector. It was printed by the Propa-

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ganda at Rome in 1641. (This is the letter of Abgarus.)

Again one meets references to sixteenth-century Hebrew presses in Greece, but it is not possible to accept these. Some are, apart from errors in date, merely mistaken readings of geographical and some of personal names. The alleged Elis press seems likely to belong to one of the Eliezers, or Eleazars, of the Soncino or Nachmias families. An allusion to Kuru Chesme as in Greece is rather an optimistic statement, for it is a village near Constantinople, to which the private press of Belvedere was removed.

It seems clear that there was no sort of printing in the area of the present Hellenic kingdom before 1821.

Hebrew printing then first, and then Turkish printing, with a little Greek and foreign, occupy our whole area.

The earliest date for the area is 1504, David Nachmias and his son Samuel having set up their press in 1503 at Constantinople, although there is talk of a proposal by Mahommed the Conqueror to introduce printing in the fifteenth century. This is less substantial than the contemporary discussions in Muscovy, though type was cast for Persia, albeit lost or destroyed soon after its patron's death.

Although it is stated that Judah Ghedaliah was printing at Salonica from 1500, the earliest dated book of his firm is of 1515. The use of the phrase "in domo" to express the firm, reminds one that he was from a Jewish press at Lisbon. It is supposed that this press was established in 1512.

Therefore we begin by the Nachmias firm at Constantinople, with which Estruc de Toulon was at first

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associated. He soon set up a press of his own (1513).

Then Judah Ghedaliah set up his press at Salonica in 1512. In 1516 Solomon Jabetz set up his press there. About 1530 Gershon Soncino came and joined his kinsman, Moses Soncino (who had worked about 1526 onwards).

There is a mysterious statement that the Jabetz family printed at Adrianople before coming to Salonica, but the only dates for Adrianople are 1554-55, which is much later than Solomon's press of 1516. There is a gap between 1555 and 1887, in which there is no printing at Adrianople at all. The same authority dates the Jabetz family's press at Constantinople at 1560, which may account for this.

In 1579 the widow of the Duke of Naxos (Regina Nasia or Mendesia) opened a private press for poor Jewish authors in her palace of Belvedere in Constantinople. This was moved to Kuru Chesme in 1593. In the meanwhile Eliezer Soncino had succeeded his father Gershon (1530-47), and Samuel Nachmias his father as heads of their respective firms. I ignore small ones.

Then Abraham Bat-Sheba set up his Salonica press in 1592, and at this time printing declined at Constantinople, where there was no press at all at the end of the sixteenth century, *i.e.* after 1586. At about this time the Salonica printer, Abraham Ashkenazi, went to Palestine and founded the press of Safed (1588). In about 1601 the Franco family set up a press at Kuru Chesme, and, when they left for Constantinople, were followed by Joseph ben Jacob of Solówitz.

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There is talk of a Greek press of Cyril Lucar in 1627. A general pause seems to have followed, but in 1639 printing was resumed in Constantinople by Solomon Franco and his son Abraham (1641-83), whose firm lasted till after 1800. (Abraham II., 1709-20.) In 1709 a firm of Nachman was set up at Salonica, which lasted till 1789.

A Joseph ben Jacob, presumably related to the one of Kuru Chesme, set up a firm in Constantinople in 1717, which lasted to the end of the century. It is needful to add that an Armenian book was printed in Constantinople in 1737, and that Armenians were printing there before 1727.

On 5th July 1727 a Hatt-i-Sharif was issued by Ahmed III., authorising the establishment of a Turkish press, which was, however, forbidden to print ecclesiastical work. (Such of this as was allowed in Arabic was printed in Asia.)

Said Effendi, son of Ibrahim Effendi, and a Magyar renegade, Ibrahim Mutafarrika, set up this first press in 1727. There was a gap in its activity in 1731, a year of revolution, but it went on under Ibrahim till 1742, when he died, and there was a pause in its history till 1756.

In 1730 a firm of Miranda appears there, and in 1735 one of Falcon, and in 1739 we get a short-lived press at Kale.

In 1741 Bezaleel Halevi came from Amsterdam and founded a Salonica firm that still exists.

It is convenient to mention here the two leading Jewish printers of the eighteenth century, Jonah Ashkenazi and his partner, Naphtali ben Azriel, and the former's son Nissim.

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The Turkish press of Constantinople printed one book in 1756; then there is a further pause till 1783. Meanwhile the Patriarch Samuel had had a press for Greek books about 1764-67, when it was given up as being too expensive. (It had powerful rivals in Roumania and Western Europe and only a small public.) At this time a Jewish firm of Kalai is at work. Abd-al-Hamid I. gave a fresh Hatt-i-Sharif to the Turkish press, which went on irregularly till 1830. The rival lists of books issued in Turkish are confused by the inclusion in the work of the official press of the books in Turkish language, but printed in Latin character (for the first time in the Ottoman Empire) in the house of the French ambassador in 1787-90.

There is a gap of ten years, 1785-95, in the history of the official press, for which Choiseul Gouffier's press supplied what was needed. Then there are two years with no books, while a new and energetic head of the press appears in Abd-al-Rahman, Professor of Geometry and Algebra, in 1798. He gave a strongly mathematical cast to its work, but only produced about one book a year.

Taking the area as a whole there are more conundrums than is convenient, and there is more to learn about even the sixteenth-century presses and about the minority presses, *e.g.*, the attempts under Protestant auspices to establish Greek presses at Constantinople, and the other efforts of a positive nature of the Jesuits.

Our sources are, moreover, incurably inaccurate and incomplete, and their dates are alarmingly uncertain.

SPANISH AMERICA

BY GEORGE PARKER WINSHIP

THE sixteenth-century Spaniards, inheriting the direct Roman tradition, understood how to transplant themselves without loss of character or culture. The city of Mexico was a thriving Spanish community within a decade of its destruction by Cortes, and ten years later an established metropolitan centre. In 1532, when Esteban Martin tried to set up a shop there as a printer, if the documents may be trusted, nobody felt sure enough of the future to patronise his venture adequately. Six years later both Church and State had their affairs well in hand. Regular official documents, the material for aggressive missionary campaigns, and plenty of incidental commissions from the public at large, were assured the foremost printer in Spain, Juan Cromberger of Seville, when he dispatched a trusted workman, Juan Pablos, to set up a branch office across the Atlantic.

The contract signed by Cromberger and Pablos, on June 12, 1539, is a document of considerable typographical interest. By it Pablos was bound to turn out 3000 sheets daily, with the aid of one assistant pressman and a negro. He was held accountable in the strictest terms for any faults in the composition or in the correction of proofs. He was forbidden to draw out anything from the receipts of the business, except what was absolutely necessary for the house-

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hold expenses of his family, allowing nothing to his wife for her services. At the end of ten years the business was to be liquidated, and Pablos, upon his return to Seville, was to have one-fifth of the net profits. Cromberger, on his part, supplied the printing outfit and bore all the initial expenses. These were carefully listed, and show that the negro cost 100,000 maravedis, which was the same as the value of the printing material, ink, and stock of paper, and twice the sum paid for the trans-Atlantic passage of four people. To the passage money should be added 70,000 maravedis laid out for wine and other necessities for the voyage. The pressman bound himself for only three years, at a salary of five and a half ducados monthly.

Pablos arrived in New Spain in September, and before the year was out he had produced, at the cost of Archbishop Zumárraga, a "Breve y mas compendiosa Doctrina Christiana" in the Mexican and Spanish languages. No copy of this, nor of a possible less compendious predecessor, if the "mas" of the title is to be interpreted as implying an earlier publication, is known to exist. Two leaves are all that survive of a "Manual de adultos," likewise executed for the Archbishop, in 1540. The next year saw the beginning of news publication in America, in an account of the earthquake which destroyed the city of Guatemala in September 1541. Of this also only one imperfect copy has survived.

Of the thirty-seven books known to have been printed by Pablos before his death in 1560, there are ten of which no copy has been recorded as still in existence, and six are known by a single example, of which half are imperfect. Of the works that survive,

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the only ones that are not religious in contents are the earliest compilation of American laws, issued by the Viceroy Mendoza in 1548; a Latin dialogue describing the University and city of Mexico, by Cervantes de Salazar, in 1552; and Molina's Dictionary of the native Mexican language, in 1555. Cromberger died in 1540, and the business was conducted on behalf of his heirs until 1547, when it became the property of Pablos. In 1550 he imported additional workmen from Spain. One of these, Antonio de Espinosa, was a type-founder, and to his skill is doubtless due the fonts of fresh type which appear after 1553.

The monopoly granted to Pablos was broken, on grounds of public expediency, in the summer of 1559, when his former workman, Espinosa, set up a rival press. It is likely that the old establishment limited itself to routine and minor work for two or three years after the owner died. It passed into the control of Pedro de Ocharte in 1563, through his marriage to a daughter of Pablos. He was a Frenchman who had been in Mexico, doubtless in the employ of Pablos, since 1558. Pablos was a native of Brescia, so that the first press was a foreign establishment. It is more than probable that this fact, aggravated by trade rivalry, had a good deal to do with charges which brought Ocharte before the Inquisition in 1572, and kept him for seven years from attending regularly to his affairs. The voluminous records of the case have been preserved, and are most plausibly interpreted by a belief that the Inquisitors were honestly anxious to do exact justice, to the accused as well as to God and His church, in the face of perplexing evidence presumably influenced, if not inspired, by

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national jealousy and trade rivalry. Ocharte's last publication before his arrest was a "Doctrina" in the Huasteca language, illustrated with 140 cuts, of all sizes and styles. Included among these are parts of several series apparently executed for other religious tracts, which have wholly disappeared. It is not unlikely, in view of the fact that an engraver was before the Inquisition at the same time on charges of Lutheranism, that this publication was intended as a public exhibition of all the pictures that the printer possessed. Whatever purpose it served in 1571, it is a precious "specimen book" for students of the history of printing. If the rival printer, Espinosa, was in any way responsible for Ocharte's troubles, these did him little good. Only one book from his press is known for the years 1572 to 1574, although the latter part of this period can be accounted for by the publication in 1575 of three large works, which were the last to bear his name.

Another Italian, Antonio Ricardo of Turin, came to Mexico in 1570, and after working for a while, in all probability for Ocharte, established a press of his own in 1577 alongside the Jesuit college. The keen rivalry between the Franciscan and the Dominican Orders, in addition to the normal needs of the community, assured plenty of work for two printers. When the Society of Jesus entered the competition for control of spiritual as well as secular power in New Spain, the brethren thought it would be well to have a printing plant within easy reach. There can hardly have been sufficient other business, however, to support a third press, and after two very active years, producing at least one book every three months,

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Ricardo decided to try his fortune where fortunes were easiest, in Peru.

There were strict administrative regulations designed to prevent any unauthorised person, and especially aliens, from entering the Spanish colonies. Ricardo must have known this, but it seems to have made very little difference to his plans. He had some trouble in finding a shipmaster who would make room for him, but in time this difficulty was overcome, and he reached Lima by the end of 1580. There he appears to have received a cordial welcome, but the officials did not dare to let him set up his press without a specific licence from the royal authorities in Spain. All that could be, was done in his favour. The City Council of Lima and the officers of the University signed a petition to the King, asking that permission be granted for the printing of primers and books of devotion, under careful restrictions. The petition produced a prompt reply from the King to the Viceroy, requesting the latter to supply further information, and particularly suggesting a desire for reasons why the request ought not to be granted. This royal letter was dated at San Lorenzo, in Spain, on August 22, 1584.

Meanwhile, the Peruvian dignitaries were occupied with an ecclesiastical Council, which was much concerned with the need of better facilities for instructing the natives in the fundamentals of the Christian faith. The Jesuit teachers were invited to prepare a Catechism in the native languages. This was finished in the early weeks of 1584, ready for printing. A printer, with the implements necessary for casting type and making books, was in the capital, presumably doing

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nothing, because of legal restrictions. Thereupon the Royal Audiencia voted, on February 13th, with a carefulness as to details which suggests much discussion and considerable hesitation, that Ricardo should be permitted to print the Catechism.

The work proceeded slowly, and was interrupted about midsummer, by the arrival of the annual mail, with dispatches from home. The most important thing in this particular batch of instructions and news, so far as the public at large was concerned, was the Royal instructions confirming a Papal decision to reform the Calendar. There was obvious need for haste in notifying all the settlements in the colony of this epochal change from Old Style to New. The Audiencia therefore, on 14th July 1584, ordered Ricardo to interrupt his work on the Catechism in order to print the "*Pragmatica sobre los diez dias del año.*" This was produced promptly, for the only recorded surviving copy, a four-page folio in the John Carter Brown Library at Providence, R. I., bears the manuscript attestation declaring that it was publicly proclaimed at Quito on 17th August of that year, although the notary neglected to state whether this was old or new dating. This is therefore undoubtedly the first South American imprint. It was nevertheless certainly printed after most of the work had been completed on the "*Doctrina christiana y catecismo para instruccion de los Indios,*" inasmuch as this volume of 92 leaves was finished and ready for the official "*Auto*" or certificate on 12th August, just ten days before King Philip, on the other side of the world, signed a letter expressing his doubts whether it would be safe to do this very thing.

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Señor José Toribio Medina's monumental bibliographies provide material for a comparison of the output of the Spanish-American press before the year 1820, unmatched elsewhere. Compiled by the same man on the same plan, they do not require the inevitable allowances for the human variable which vitiate similar comparisons elsewhere. Medina lists 12412 titles for Mexico and 3948 for Lima. This undoubtedly represents the relative size and prosperity of the public to which the press catered in the two regions. Both figures are of necessity far below the actual total output, but the loss is presumably about the same in each, and of similar character. The things that have not survived were the most interesting, as everywhere. In this respect, Peru is the heavier loser, because the things printed in Lima from the first appealed to the ordinary citizen much more than those that supported the Mexican presses. In both Viceroyalties, the administration was able to exercise an effective control over the printers. The officials of Church and State co-operated in this matter, and in neither colony was there sufficient intellectual independence to maintain, much less introduce, independent hidden printing. The emphasis here is on the insufficiency, for the records of the Inquisition show that in the sixteenth and seventeenth centuries there was rarely any difficulty in finding prohibited books in the possession of persons who were suspected of holding heretical notions. There must have been a flourishing, well organised business engaged in supplying forbidden literature, as everywhere else, but in Mexico this contraband trade was almost too easy to be exciting. The illicit trade went on at

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every fishing settlement along the coast, to an extent that made it necessary for the larger ports, even Vera Cruz, which was the only authorised port of entry, to disregard many of the legal restrictions in order to hold the legitimate commerce carried on by independent traders. In Peru the situation was entirely different, for the Pacific coast offered little to tempt freebooters. This explains why news-sheets flourished from the earliest days of the press in Lima, whereas they were rarely issued in Mexico. The difference is a curious illustration of how comparative costs affected trade. It was cheaper to ship blank paper to Lima and print such news as met the local demand, whereas Mexico imported a sufficient supply of the printed Spanish gazettes and other newspapers to meet its requirements. These had been read and passed around, long before any rival local publication could have been circulated.

The earliest Peruvian news-sheet that has survived contains a letter of "Ricardo Havqvines," better known as Richard Hawkins, describing his capture by the Spaniards in July, 1594. A quarter century later, these news pamphlets had begun to appear regularly upon the arrival of the ships bringing dispatches from Panama and Spain. The two which appeared in 1621 were from the press of Jeronimo de Contreras, who was the first American member of a family of printers which dominated the business in Lima for more than a century. Contreras had been established in Seville, where, in 1618, he issued a volume written by a Franciscan friar then recently returned from Peru. Two years later, his name appears on a book dated at Lima. The newcomer

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promptly allied himself with the family of the principal rival craftsman, and within a few years he became the leading printer in the South American metropolis. His son, José, succeeded to the business in 1641, and maintained the family prestige until 1688. A grandson, José de Contreras y Alvarado, began his independent career in 1686, and was the most successful of the family. For two decades, until 1712, he managed the only printing establishment in the country. He monopolised the business of printing the primers used in the local schools, obtained an appointment as Royal Printer by decree of the Spanish crown, and was printer to the Inquisition, to the Tribunal of the Cruzada or Indulgences, and to the University of San Marcos, already well on its second century. In 1713 he was succeeded by his brother Jeronimo, who continued the business until 1720, when the last book recorded as bearing the family name appeared. The daughters of the family kept their interest in the business for another fifteen years or more, and it was continued by persons allied to the family until 1779.

The extension of the press to other localities was due almost exclusively to the Jesuit Order. Between 1610 and 1612 a printing outfit was probably in operation at the mission station at Juli, in the province of La Paz, 12,000 feet above sea level. This was employed in printing the manuals in the Aymara language prepared by Padre Bertonio, among the most precious of the records of the native languages. It was nearly a century later before any other Spanish locality felt the need of a press.

The tracts produced at the Jesuit mission stations

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in Paraguay, along the upper stretches of the tributaries to La Plata river, will always exert a fascination upon all who care about the problems of primitive book making. The missionaries had been established in this region for half a century, when they decided to add a printing outfit to their equipment. They had built up a flourishing colony, and the reports of what the converts had accomplished under the guidance of the friars show that the natives were both skilful and adaptable. It is quite within the bounds of possibility that their first experiments were with impressions from wooden blocks, similar to the fifteenth-century block books. Two of these blocks, of unknown date, are still in existence. It was a much more serious task to create a regular outfit of press and metal types, the cost of which, if imported from Europe, would have been beyond their resources. In 1703, the head of the missions reported that type had been cast from moulds constructed by the native converts, who had also built a press. The type was probably made of lead. Paper was beyond their capacities, so that the actual printing was limited by the amount of this commodity that could be obtained from the ships that brought supplies from Europe. When the first book was completed, two years later, it was adorned with initial letters from woodcut designs executed by the natives, and a series of forty-three illustrations, representing scenes from the life of Christ. The surviving recorded imprints from this press at Loreto are dated 1713, 1721, and 1727, but doubtless others have entirely disappeared, although the number of works undertaken, as well as of copies printed, must have been small.

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During the eighteenth century, the growth of the remoter settlements and the increasing security of the country gave occasion for frequent efforts to set up provincial presses. The Jesuit college at Bogotá secured an outfit and a printer, which enabled them to issue a book in 1739. This is now the only known production from this establishment, but there are references to it in the records which prove that the press was in use at intervals until the Order was expelled from the Spanish dominions in 1767. At about the same time that the Bogotá college press began work, in 1741, a citizen of Quito, Alejandro Coronado, was granted permission to open a printing office in that city, but for some unknown reason he failed to carry out his plan. The Jesuits had a press operated by a German craftsman, at the mission station of Ambato, south of Quito, in 1745, and this was transferred to the ancient capital, where the first book was printed in 1760.

The first Venezuelan book was printed at Nueva Valencia in 1764. This is one of the very few of these early provincial productions which is still valued on account of its contents. It is a " *Descripcion exacta de la Provincia de Benezuela,*" and fully justifies this title. This is the only imprint from this region, prior to 1812, recorded by Sr. Medina. Nothing has been found from Sr. Medina's own country, Chile, of earlier date than a tiny " *Modo de ganar el Jubileo Santo* " printed at Santiago in 1776.

A press was in operation at the Jesuit college of Monserrat, at Cordova del Tucuman in the interior of the modern Argentina, by 1766. The expulsion of the Order a year later put a sudden end to its

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activities. The material lay idle for a dozen years, until it was transported to Buenos Aires and put in order for the use of the Orphanage established there in 1779. The official and social patronage of this institution gave the press, which was conducted for its benefit, an effective monopoly of printing in the Argentine colony for many years. At Lima, the press had likewise been employed for the benefit of the "Niños expositos" after the disastrous earthquake of 1746. In both cities, the assistance derived from the boys, many of whom became skilful apprentices, was of the greatest advantage in maintaining a supply of workmen. At Buenos Aires, in spite of frequent changes in administration and policy, the press served the community on the whole satisfactorily. The occupation of Montevideo, in 1807, by a British force which sought to extend its influence by circulating a bi-lingual newspaper, "*La Estrella del Sur*," threatened to force the Buenos Aires press into unwonted activity in reply. The sudden departure of the invaders resulted altogether advantageously for the establishment across the Bay, inasmuch as the English were constrained to sell the entire equipment of their printing office to the enemy. The original supply of type secured from Cordova had been of considerable amount, but the long period of neglect had brought disarrangement and loss. At the time when the English outfit was bought, another supply already ordered from Europe was on its way, so that Buenos Aires soon possessed by far the best equipped printing establishment on the Southern continent, and probably on the Western hemisphere.

After the establishment of Independence from

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Spain, the press in each South American community became, much more than in the period of the Viceroy, subject to the ordinary economic laws. Local politics had an increasing influence upon its activities, and added greatly to the interest of the output, while the civil authorities exercised much less influence upon its productions. As everywhere else, the printing business reflected the economic condition of the locality. With increasing wealth in the twentieth century, the larger South American cities are being provided with printing establishments equipped with the latest mechanical improvements, capable when desired of turning out work that compares creditably with that of similar establishments elsewhere.

LITERATURE: *J. T. Medina*: *La Imprenta en Mexico* (1539-1821), 8 vols. Santiago, 1907-12; *La Imprenta en Lima* (1584-1824), 4 vols. Santiago, 1904-7, and his other works covering the whole of Spanish America.

NORTH AMERICA (ENGLISH-SPEAKING)

BY LAWRENCE C. WROTH

IN most essentials of equipment, practice and tradition, the colonial American printing-shop was in counterpart the English provincial office of the corresponding period. The earliest printers of what is now the United States came to the new country from English establishments, and for many years the craft was kept filled by men of this origin or by others who had served an apprenticeship in a local printing-house of which the master had been an English journeyman. The influence was thus firmly imposed, and although the existence of numerous local governments, each with its official publications to be issued annually, gives a superficial dissimilarity to the productions of the press in the two countries, yet the activity of the colonial press remained throughout but the carrying on of an older tradition. It is differences rather than points of likeness that normally engage the attention, so that before considering in detail the origin and spread of the typographic art in the colonies, it will be interesting to speak briefly, and necessarily in generalisations, of the product of the colonial press and of certain conditions that faced the printer in carrying on his tradition in a new land.

The book or pamphlet of purely literary intention

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was relatively rare in the early days of American printing. Except for the publications of a few printers who strove consciously to give a medium of expression to literary compositions, the poem or essay or historical piece was an accident of the press rather than a staple. The first concern of the printer, then as later, was to secure a contract from the Government for the printing of its Assembly proceedings and executive papers, for with such a foundation assured to take care of his running expenses, he could look about for work of another character to provide his profit. Unquestionably one of the most important of his staples from the standpoint of gain was the blank form, legal and commercial, which he kept in stock or stood prepared to print in quantity at a few hours' notice. Warrants of all sorts, indentures, bill heads, bills of lading, insurance and other ships' papers formed a commodity of daily necessity in which the printer found a profit that could be obtained with the minimum of labour. In some cases the cost to the purchaser of these forms was established by government ordinance ; in others competition between two or more printers kept the price at a fixed sum. In this utilitarian production the printer who gave his customers neat and correct work was sure to find in the end a regular source of profit. So great was the need for the legal and business form, however, that in towns where only one printer was at work the profit was sure even when the blanks were anything but neat and correct.

The more enterprising printers of the period attached to themselves some person of mathematical skill who was able to compile an almanac for the local meridian.

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The fame of *Poor Richard*, the Franklin almanac, has been so great since the days of its publication that the layman thinks of it as comprising the sum of colonial calendar-making, but *Poor Robin*, Theophilus Grew, John Warner, Benjamin West and other pseudonymous and undisguised writers prepared almanacs of excellent quality for the printers of their communities to issue regularly in the fall of each year. Almanac publication, for reasons universally comprehended, furnishes a topic of perennial interest in all lands. Local American conditions gave these little books of daily household reference unusual importance in the lives of the people, and it was a poor printer indeed who failed to attempt the annual issue of an almanac to fill the need of his neighbours in town and country.

The colonial printer of the eighteenth century carried on his work at a time when the periodical newspaper had become a commonplace of English social life. The newspaper met an intellectual want of the English and of the derivative race, and in consequence early found its place in the spiritual economy of the American colonists. The printing of the broadside news sheet continued for generations as a necessary means employed between issues of the regular journal for the publication of news of immediate interest, but the occasional news sheet, familiar in European countries in the pre-newspaper days, and in the Spanish-American states for long afterwards, had no place in the life of English America. Every American printer of the eighteenth century either issued a weekly journal, attempted such an enterprise and failed, or looked forward hopefully as

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the goal of his ambition to the time when he might see his name in a newspaper colophon. The fact that for long years the functions of editor and publisher were one gave the eighteenth-century printer a prominence in the community lost in Europe a century or more earlier by the printer of similar rank as regards equipment and standard of output.

Another staple issue of the colonial press was the printed sermon. In the middle and southern colonies the printed sermon was only an occasional publication, though it is true that, regardless of section, sermons preached at the opening of the Assembly, on patriotic anniversaries, or on some other occasions of public interest, frequently found their way into print. Controversial sermons, too, found support from the adherents of both parties to the controversy, wherever it might rage, but in general the sermon was not a notably important staple of the printing houses south of New England. In that section, however, it formed the bulk of the extra-governmental issues of the press. In addition to the causes for publication that have been named as existing elsewhere, in New England the printing of sermons as a private enterprise by the preachers themselves assumed the proportions of a trade. There was none of the false modesty, the deprecating apology, with which printed sermons are often introduced to their readers as "published by request." The people demanded pious reading, and their pastors saw that they got it. There was little speculative theology in the type of sermon commonly published. Good stiff doctrine of a denominational character, lighted up by the ever-flaming fires of hell, gave the reader the greatest

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satisfaction. This of course is a generalization. An unprejudiced reading of the New England Sermon, as the type is called, reveals many sweetnesses of character, many aspects of truth and spiritual beauty, and a sense of religious reality that were valuable factors in forming the complex character of the New England that came to its flower in Ralph Waldo Emerson.

In a country of many provinces the differences of legal and commercial conditions and practice gave rise to other species of publications that must be mentioned. Numerous editions of that ancient English handbook, the "Office and Authority of a Justice of the Peace," came from various colonial presses with local adaptations. The absence of a fixed medium of exchange required calculations often too abstruse for the ordinary merchant and his patrons. In relation to the English pound the paper currency of one colony differed in value from that of any other, while the prevalence in the market of Spanish money, and the use of tobacco in Maryland and Virginia as a medium of exchange, demanded the frequent publication of "Ready Reckoners" adapted to the uses of the several communities. "The Dealers' Pocket Companion," "The Merchants' Magazine," and other similarly named commercial handbooks found sure sale throughout the communities for which they were intended.

A source of income for the printer to be mentioned last, not because of the least importance, however, was the separately printed advertisement. Though of early origin the practice of newspaper advertising by merchants and others came very slowly to the position

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in our daily economy it now occupies. The examples of the advertising handbill and poster that have been recovered, and these are a very small proportion of the whole number printed, show how dependent was the advertiser of the day upon a broadside that could be distributed from door to door, from farm to farm, or posted at the court houses of the various counties. Government notices and proclamations, notices of militia assemblies, the arrival of a cargo of goods to be sold by a merchant, the description of a runaway slave, apprentice or indentured servant, all the linen of the pioneer community, clean or dirty, was disposed in the public gaze by this method of display, and all to the profit of the printer.

To the present-day observer of its activities the most interesting feature of the colonial American press is its portrayal of the daily life of the pioneer communities by means of the productions that have been specified in the foregoing pages. Hardly less in the degree and quality of interest is the indication the literary publications give of the formation and growth of ideas in English America. Primarily utilitarian, the colonial American press came slowly to the status of a spiritual force in the life of the people it served. It is a broad generalization to affirm the predominant religious concern of the New England press as opposed to the literary and political interests of the printing shops in the middle and southern colonies. Yet such a generalization, even if it cannot be defended at every point, serves to express a deeply underlying truth. The first book printed in English America was the Bay Psalm Book, Cambridge, Massachusetts, 1640, an entirely new translation from the Hebrew of

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a great body of religious verse. The first original poem of the country was Michael Wigglesworth's "Day of Doom," a terrible theology expressed in an equally terrible versified production printed in Cambridge in 1662. The New England sermon, the formularies of the churches, and the controversial tracts, burdensome to the modern spirit though they may be, are so large a factor in the production of the press that they must be taken as indicating the intellectual and spiritual habit of the region of their origin. When we turn to consider the things that were being printed in the colonies to the south, an immediate difference in intention is perceived even when a likeness in kind prevails. In Church of England Virginia, Church of England and Roman Catholic Maryland, countries of large landholders, of scattered towns, of social extremes, men of taste carried their learning as an ornament, as a decoration of the mind rather than a means of grace. The first work of literary intention carried out in English America was the translation of Ovid, printed in London in 1626, made by George Sandys in Jamestown, Virginia, during his residence there in 1622-25, and when presses began finally to operate in the South we observe in their output a reflection of the polite and learned world of London. Translations from the classics, Lovelacian lyrics, elegant trifles in verse and prose provide a considerable factor in the printed material that must be studied by the social historian. In Maryland a local satirical piece, the "Sotweed Factor," by Ebenezer Cooke, first published in London in 1708, republished in Annapolis in 1731, following the same author's "Sotweed Redivivus" of

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Annapolis, 1730, is probably the most vigorous and original American poem of the times. The translation by Richard Lewis of Holdsworth's Latin satire on the Welsh, the "*Muscipula*," printed in both languages in Annapolis in 1728; John Markland's ode on printing, "*Typographia*," of Williamsburgh, 1730; "*Poems on Several Occasions*," by a Gentleman of Virginia, Williamsburgh, 1736; James Logan's translation of "*Cato Major*," printed by Franklin in Philadelphia in 1744, are locally printed and locally written pieces that indicate the tastes and feelings of the men of learning of these communities. The student of American ideas finds in the issues of the colonial press fascinating material for the comprehension of spiritual tendencies, and in the different character of the publications of North and South a phenomenon that gives opportunity for divergent lines of theory and speculation.

II

THE EQUIPMENT OF THE COLONIAL PRINTING HOUSE

The mechanical equipment of the colonial printer, and the conditions of his trade in a pioneer country, are matters of special interest. Like the normal English printer, he continued until the nineteenth century to make use of the old-fashioned wooden printing-press that Moxon in 1683 had urged him to discard in favour of the Blaeu press, a "machine invented upon mature consideration of Mechanick powers." For some reason the Dutch press failed to make a place for itself in the English and Scotch printing houses, and naturally the men who went

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out from them to America continued to use the machine with which they were familiar.

It was only with the incentive to native manufacturing given by the non-importation resolutions of the colonies that press building began to be a common business in America. It is true that an occasional versatile printer, the German Christopher Sower, for example, would build a printing-press for his individual use, but it was not until 1769 that we find a press being constructed by an American mechanic for the use of an American printer. In that year Isaac Doolittle, of New Haven, built a mahogany press for William Goddard of Philadelphia. Thereafter in Philadelphia, Boston and Hartford press building began to be a commonplace of industry, so that by the end of the century the American printer had become completely independent of the English mechanics for this article of his equipment.

The experience of the colonial printer in regard to the importation of type was exasperating to men of enterprise. In the early years of the trade the conditions of type manufacture in England made this essential article expensive and difficult to secure in good condition, so that almost invariably the American printer began his career with second-hand type showing in impression its years of service in a London shop. After the revival of the art of type-founding under Caslon, it became possible to import letter of the best quality in suitable founts, but the cost of importation imposed a severe strain on the printer's finances. His work suffered in excellence in consequence of the disproportionate cost of type procured in this manner, though it cannot be said that even

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with the handicap of expensive importation his productions were generally inferior to the normal issues of the British shops. Even the lesser London printer felt the founder's bill to be a burden so great as to render frequent renewal of founts impossible.

A happier condition for the Americans began when, under the impulse given by the fervour of the first non-importation proceedings, Abel Buell, in 1769, and Christopher Sower, in 1770, began experiments in the manufacturing of printing type in every stage of the process from the blank punch to the finished letter. In 1775 a newspaper, Story and Humphreys's "*Pennsylvania Mercury*," appeared in Philadelphia, printed entirely in type made by an unknown founder, probably Justus Fox or Jacob Bay, of Germantown, Pennsylvania. The continuance of these men in the business of type-founding, the work of Buell in Connecticut in 1781 when the Revolution had made further importation impossible, the coming of James Bayne to Philadelphia between the years 1787 and 1790, and of Archibald Binny in 1795, brought about the emancipation of the American printer from the English founder. Between the years 1796 and 1801 more than one hundred American printers from Massachusetts to Georgia had accounts with the type-founding house of Binny and Ronaldson of Philadelphia.

The colonial printer was able to obtain locally made paper in quantity many years before he could purchase type and presses in his own country. In the year 1690 William Bradford, then of Philadelphia, formed a partnership with William Rittenhouse for the manufacture of paper. The mill that Rittenhouse

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established near Germantown, Pennsylvania, became the starting-point of an industry that enabled this state in 1789 to boast of an annual production of 7000 reams of paper by its forty-eight mills. At this time there were about eighty mills throughout the country operating in practically every state from Maine to North Carolina. In the century since Rittenhouse's beginning, the ordinary needs of the American printer had been met more fully with each succeeding year by the local manufacturers. The quality of the paper was not always of the finest, but it served admirably for newspaper and job work, and even for ordinary book and pamphlet work. Paper for the finer or more important books continued during this period to be imported from England, or, preferably, through England from Holland.

In 1775 the printing house of Story and Humphreys of Philadelphia advertised that it had for sale a book known as the "Impenetrable Secret," "printed with Types, Paper and Ink, Manufactured in this Province." As there seems to be evidence that the presses used by this printing firm were also of local manufacture, the "Impenetrable Secret," of which no copy is known, may be regarded as the first American book. With its publication the printing art in America had come of age.

The normal American printing house of the eighteenth century was a "two press" shop, containing type and appurtenances in sufficient amount to render possible the publication of a weekly newspaper without interfering with the usual job work that came in to the printer day by day. One shop of this type, that of Jonas Green, of Annapolis, had in its cases

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2250 pounds of type, comprising 800 pounds of bourgeois in which the newspaper was printed, 400 pounds of long primer, 390 pounds of small pica, 360 pounds of English, and 300 pounds of sorts. The money value of the type exceeded greatly the value of all the other articles of equipment taken together. The total appraisal of a shop of this character in good condition amounted to a sum between ninety and one hundred pounds sterling, but from it came, from time to time, books of great size and occasionally of distinctive typographical excellence. The largest book published in English America during the colonial period was "*Der Blutige Schauplatz*," a Menonite martyr book of 1350 pages folio, printed in 1748 by the Pietists of the Ephrata Monastery. In the closing decade of the eighteenth century, using paper and type made in Pennsylvania, Thomas Dobson, of Philadelphia, published, in twenty-one creditably produced quarto volumes, an American issue of the third edition of the "*Encyclopædia Britannica*." From the æsthetic standpoint the product of the American press was no better and no worse than that of the English provincial printer or of the smaller London craftsman, though in neatness and in general excellence the work of such printers as Franklin and Jonas Green was usually worthy of remark. The skilful balance and thoughtful use of type ornament that characterized the work of William Goddard, a printer of Rhode Island, Pennsylvania and Maryland, has its lesson for the best printers of to-day.

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III

THE FIRST PRESSES

The natural laws that set back the development in cultural progress of a colonized people had their inevitable operation on the Atlantic seaboard of North America. The English settlers came to this coast sprung from a race that had for its heritage Moses and the Prophets, poet and sage of the classical world, and their own Chaucer, Spenser and Shakespeare, but it was inevitable that while the parent stock was producing Milton, the transplanted stem should be producing no writer or thinker of more than local consequence. The period of retardation was shorter, however, than it might have been; for along with their few goods the American settlers brought with them individualism in religion, representative government, a belief in the efficacy of schools, and the Englishman's interest in political theory and practice. These elements, given energy and direction by new problems of life amid new surroundings, encouraged a habit of mental activity and predisposed the people to recognize in the press a vehicle for the transmission of ideas. Unlike the conditions in England, there were here no great metropolitan centres from which might issue an abundance of printed books and pamphlets. The population was widely scattered in self-contained colonies along the Atlantic coast, each with its provincial capital as a centre. Once the beginning had been made, these towns, one after another, became supplied with printing houses, and it is a fact not fully realized that Cambridge, Boston, Philadelphia,

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St Mary's City, now forgotten, and New York saw the open operation of printing-presses before the cities of Liverpool, Birmingham and Leeds. The reasons for this are to be found, as is well enough known, in the attitude of the English Government toward the free use of the press.

The several Press Restriction Acts by which printing in England was confined to London, York, and the universities seem to have had only a restricted operation in the colonies. Indeed one need but glance at the thousands of tracts from "hidden" presses found in the catalogue of the Thomason Collection in the British Museum, or in the catalogue of Quaker publications issued by Whiting in 1708, to become convinced that even in England these Acts, like others of a prohibitory nature of our own day, either said more than they meant, or meant more than the authority behind them was able to enforce. There was only half-hearted effort on the part of the home Government to stay the establishment of printing in America, and although the local governments many times came down bitterly hard upon some luckless printer's indiscretion, yet, to the best of my knowledge, the Parliamentary Restriction Act was invoked only once, and then only one provision of it was cited by a group of stiff-necked magistrates of Philadelphia to confound a printer, whose defender immediately turned the weapon against the persecutors. The presses at Cambridge and Boston were established without governmental opposition, and the Cambridge press had been working without hindrance from abroad for more than forty years before a royal edict closed the printing house that William Nuthead

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attempted to set up in Jamestown, Virginia. As the result of this printer's misguided haste, His Majesty in 1683 instructed the outgoing governor of Virginia to "provide by all necessary orders and directions that no person be permitted to use any press for printing upon any occasion whatsoever." A few years later this prohibition began to appear in the instructions given to the royal governors of other colonies, but invariably with a qualifying clause that completely changed its intent. The saving words were "without your especial leave and consent first obtained," and though there was frequent disagreement between governor and printer as to what matter was proper to print, yet I have failed to discover a single case in which a colonial governor refused to license a responsible craftsman who desired to set up a printing house. The disagreement indeed was not often one of principle between the officials and the printer as to the desirability of the press; rather was it in general a difference of opinion between the conservative Government Party and the Lower House of Assembly arising from particular considerations of expediency, the burgesses acting always as the representatives of a free people, who demanded an open and well disseminated record of political proceedings. When the eighteenth century began, the only restriction on the American press besides that of common sense was the existence of the law of libel, and in 1734 the trial of John Peter Zenger established in English America the principle that in prosecution for libel the jury were the judges of the facts in the case as well as of the law.

In most of the colonies the American printing shop was established in the first instance by the encourage-

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ment of the local legislatures. In addition to their respect for the printed record, for the permanency of codes of law and of session laws multiplied by many copies put out in the rectitude of type, these bodies desired to inform the people of the conduct pursued by their representatives in assembly. Furthermore, the proclamations and innumerable blank forms required in the executive and judiciary, the satisfaction of the clergy at seeing their sermons in print, the obvious convenience of the business form, the printed advertisement and the newspaper—these combined to make the service of a printer something to be desired by everyone in the busy little communities, except by those government scribes whose livelihood was diminished by his activities. It was entirely as a utilitarian adjunct to the political and commercial life of the country that the press in English America had its beginnings.

MASSACHUSETTS.—An exception to this imputation of a materialistic origin of the American press occurs in the establishment of the earliest and most interesting printing house in the country. Although the first issue of the Cambridge Press was the blank form known as "The Freeman's Oath," and its second was an almanac, yet the motive behind its establishment was unquestionably the propagation of the Faith. The Reverend Jose Glover was one of those English friends of the Massachusetts colony whose interest took the practical form of raising money for the College at Cambridge. In 1638 he set out from England with his wife and family and a locksmith named Stephen Daye, intending to settle permanently

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in Massachusetts. He had raised among his friends the sum of £49 for the purchase of a printing-press and a set of types for the use of the College. It is not clear by what processes this equipment came to be regarded as his personal property, but as the result of his death on the voyage, the first American printing-press came to Massachusetts as the property of Mr Glover's widow, who caused the establishment to be set up, with Stephen Daye as printer, in the house of Henry Dunster, the President of the College.

In the ensuing years the Corporation for Propagating the Gospel in New England undertook an extensive missionary propaganda by means of the printed word. London was the centre of its publishing operations, but the desire to print the Bible in the Indian tongue at the place where, from the translator's standpoint, that object could be most fittingly accomplished, led to the sending to Cambridge in the year 1659 of additional typographical equipment in the form of press and letters. The "Whole Book of Psalms," the first book printed in the English colonies, had been published in 1640; various catechisms, secular laws, college publications, almanacs, sermons and controversial tracts had been coming year by year from the press. Now, after nearly twenty years of activity of the Cambridge press, the printing of the Bible, translated into the Indian tongue by John Eliot, was begun by Samuel Green and carried to completion by him and Marmaduke Johnson. The New Testament appeared first; two years later, in 1663, the complete work, known as the "Eliot Indian Bible," left the press in an edition estimated at about fifteen hundred copies, the culmination of

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a courageous effort on the part of the translator and the printers.

It should be mentioned here that we shall find the name of Green in the imprints of many American books of the ensuing two centuries. The descendants of Samuel Green took to printing as their family craft, and their establishments in Massachusetts, Connecticut, Maryland and Virginia stood for the best in the typographical ideals of their respective periods until the death of Jonas Green the second, fifth in descent from Samuel, in Annapolis in 1839.

The secular intrusion that soon occurred in the business of the press in America began with the setting up of an independent establishment in Cambridge by Marmaduke Johnson. After more than one effort Johnson, in 1674, secured permission from the General Court to remove his press to Boston. This act accomplished, the printer died and gave opportunity to John Foster, the purchaser of his equipment, to establish in 1675 the third American press. The unwillingness of the General Court to permit Johnson's removal to Boston arose from distrust of that printer and from the prevailing fear of a general diffusion of printing. One can hardly credit this body with a foreknowledge of the practical extinction of the press in Cambridge that occurred with the establishment of a press in the busy town on the other side of the Charles River. A native-born American and a graduate of the College, Foster was also a man of versatile accomplishment. He acquired by his own efforts a small degree of skill in wood-engraving, and illustrated more than one of his publications with cuts that must always have

Massachusetts

interest as American "primitives." Notable among these were the map of New England that appeared in his edition of Hubbard's "Narrative of the Troubles with the Indians in New England," Boston, 1677. One feels a certain satisfaction that a native school of book illustration began at this early period in the American printing industry, but the satisfaction is somewhat tempered in intensity by the reflection that printed books had been nobly illustrated in Mexico more than a century before English America saw the first of Foster's praiseworthy but crude efforts.

The American press had been in operation half a century before a genuine newspaper, as we understand the term to-day, issued from any of the shops. On 25th September 1690 appeared "Publick Occurrences, both Foreign and Domestic," a small folio of two leaves with a colophon on page three reading: "Boston, Printed by R. Pierce for Benjamin Harris, at the London Coffee House, 1690." This sheet was headed Numb. I., and was announced for monthly publication, but it was issued without licence and met with immediate suppression by governor and council. Nevertheless its publication must be regarded as marking the commencement of American journalism. Fifteen years after this inauspicious beginning, "The Boston News Letter," 24th April 1704, published by authority and "Printed by B. Green," came from the press under the management of John Campbell, the local postmaster. With varying fortunes and changes of name this journal continued publication until the year 1776, "the first newspaper," Mr Evans says, "continuously published in what is now the United States of America."

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PENNSYLVANIA.—It was with something of a flourish that the first American press beyond the borders of Massachusetts announced itself to its clientage. A young English printer named William Bradford, a journeyman of the Quaker printer, Andrew Sowle, of London, came into touch with persons who directed his thoughts toward the establishment of a press in Philadelphia, the centre of the recently founded Friends' colony. In the year 1685 the "*Kalendarium Pennsilvaniense*" bore an announcement in which William Bradford, its printer, asserted that "after great charge and trouble, I have brought that great Art and Mystery of Printing into this part of America." Thus was begun the typographical art in a community where during the eighteenth century the press was to attain an unusual significance, steadily overtaking, indeed, in interest and in bulk the publishing activities of Massachusetts, and surpassing in these particulars the output of any other colony. Here in the Quaker colony was the crucible of colonial America, here the conflict of races and creeds and of political difference was at its highest point, here were wealth, education and an enlightened people. Here, too, was the political leadership of New Jersey and Delaware and an economic connection so close as to make the three at times take on the semblance of a single colony. The Bradfords, Franklin, Bell, the Sowers, the German Pietists at Ephrata, the Dunlaps, Goddard, the Halls, and other active printers in and near Philadelphia expressed in type the active intelligence of their community. Through the enterprise of William Bradford and William Rittenhouse, already spoken of, a paper-making industry was begun

Pennsylvania

in Pennsylvania in 1690 that early gave this colony pre-eminence in the manufacture of a commodity essential to the printing trade, and in Philadelphia, in the last quarter of the eighteenth century, type-founding assumed the proportions of a national industry. These events and the later importance of Philadelphia as the seat of the Continental Congress and of the Constitutional Convention were not without their influence in determining that city as the focal point of American typographical interest in the eighteenth century.

William Bradford gave offence to the Quaker magistrates of Pennsylvania by referring in one of his earliest publications to William Penn as "the Lord Penn." The Quaker rulers, including Penn himself, looked uneasily at the existence of a press in the colony, and Bradford for his part disdained to walk delicately in the presence of God's regents. Until he removed perforce to New York in 1693 he suffered frequent interference from the hierarchy. It is probable that his successor in Philadelphia, the Dutch printer Reinier Jansen, came there in 1699 simply as the agent of Bradford. The son of Reinier Jansen, known as Joseph Reiniers, carried on the business for some years in succession to his father, and in 1713, after a term of years in which the Bradford interest may have died out, there appeared a Philadelphia imprint bearing the names of William and Andrew Bradford. The father never returned to Philadelphia as a place of residence, but for many years Andrew Bradford remained its chief printer. He was displaced from this eminence only by the superior skill, knowledge and shrewdness of Benjamin Franklin, who

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brought to the exercise of his trade the qualities, not all of them of the loftiest character, that afterwards carried him to congresses and courts. In 1719 Andrew Bradford began with the issue of 22nd December, "The American Weekly Mercury," the first newspaper to be published south of Boston. The "Mercury" was issued continuously by Bradford until his death in 1742, and after that event his widow, Cornelia Bradford, carried on the journal for four years.

VIRGINIA AND MARYLAND.—Before the establishment of the Bradford press in Philadelphia in the closing days of the year 1685, an attempt had been made to introduce the art of printing into Virginia. In 1682 John Buckner, a merchant and landowner, had brought to Jamestown a printer named William Nuthead. The press was set up and the printer began to compose the acts of an Assembly not long adjourned. In the meantime he printed "several other papers," of which the nature is not known, and pulled proofs of two sheets of the acts. At this stage a flurry of alarm seems to have seized the governor and council. The printer and his patron were abruptly called in to audience and bound over to let nothing pass the press, "untill the signification of his Majesties pleasure shall be known therein." Several months later a new governor came out to Virginia bearing the royal order that "no person be permitted to use any press for printing upon any occasion whatsoever": a complete and unqualified prohibition of printing in the colony. The mandate was effective: it was nearly fifty years later, in 1730,

Virginia and Maryland

that William Parks began the operation in Williamsburg of the first permanent Virginia printing-press.

It was early in the year 1684 that Lord Howard of Effingham reached Virginia with the order prohibiting printing in the colony. It is not certainly known what was the next move of the harassed printer, but two years later we are able to pick up his trail in a neighbouring colony. In October 1686 we find these words in an act of the Maryland Assembly for paying the public charge of the Province: "To Wm. Nuthead Printer five Thousand five Hundred and fifty pounds of Tobacco." If this was a reward for past services, as seems probable, it could mean that the Nuthead press had been established in St Mary's City, the Maryland capital, in December 1685. If it was a subsidy to encourage his settlement in Maryland it sets the year 1686 as marking the inaugural of printing in that province.

There remains only a single imprint from the Maryland press of William Nuthead, though evidences of his residence in St Mary's City and of his occupation there as a printer from 1686 until his death in 1694 are very clearly written in the provincial records. During the Protestant Revolution of 1689, the successful anti-Catholic and anti-Proprietary party issued two printed documents: "The Declaration of the Reasons and Motives for the Present Appearing in Arms of their Majesties Protestant Subjects in the Province of Maryland," and "The Address of the Representatives of their Majestyes Protestant Subjects in the Province of Maryland." No copy has been found of the Maryland issue of the "Declaration," but a London reprint, four leaves, "Licensed,

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November 28th, 1689," bears the following colophon : " Maryland, Printed by William Nuthead at the City of St Maries. Reprinted in London, and Sold by Randal Taylor near Stationers Hall, 1689." Of the broadside " Address," on the other hand, there remains in London in the Public Record Office a copy with an imprint that declares its origin in the words, " Maryland printed by order of the Assembly at the City of St Maryes August 26th 1689."

William Nuthead was succeeded by his widow Dinah, who, with her family and press, followed the Government in its removal from St Mary's City to Annapolis, the new capital on the Severn. Here she gave bond for good behaviour and received in return the governor's licence to print. There are indications that she continued the operation of her press for some years, though no imprints from it or other records have been found to render certain this assumption. She was the first of a long line of women distinguished in American typographical annals. Of the work of her successor, Thomas Reading, there remain several examples, including two editions in folio of the collected laws of the province. John Peter Zenger began his career as master printer in Maryland in 1720, some seven years after the death of Reading. After another period in which no printer had residence in Lord Baltimore's province on the Chesapeake, William Parks came to Annapolis in 1725 and, encouraged by statute, re-established the printing business of the colony on a firm and enduring basis. His genuine enthusiasm for newspaper publication resulted in his beginning in 1727 the " Maryland Gazette," the first newspaper to be published south of Pennsylvania.

New York

NEW YORK.—In the closing decade of the seventeenth century George Keith, always in the opposition, succeeded in creating a schism among the Friends of Philadelphia, where he was acting as superintendent of schools. Among his sturdiest partisans was William Bradford the printer, from whose press came, in 1692, Keith's pamphlet, entitled "Appeal from the Twenty Eight Judges to the Spirit of Truth." Bradford was imprisoned straightway on the charge of printing seditious matter and, under the old Parliamentary Press Restriction Act of 1662, of publishing a pamphlet to which he failed to affix his name as printer. The high gods must have laughed when the Quakers brought this charge, for they of all men had excelled in evading this provision of the Act. In defending Bradford, Keith drove the dagger of this inconsistency straight at their breasts, but the armour of self-righteousness prevailed even against ridicule. The magistrates were not to be turned aside from their determination to break up the Keith-Bradford alliance, and when Bradford succeeded in gaining his freedom he accepted the inevitable, and Governor Fletcher's invitation, and betook himself to New York, where in 1693 he became the first printer of that important colony. In "New England's Spirit of Persecution transmitted to Pennsylvania," printed by Bradford in 1693, is found the story, from the standpoint of the malcontents, of the trial of Keith and his contumacious associates.

One determines only with difficulty and ultimate uncertainty the order of Bradford's imprints in 1693, the inaugural year of printing in New York City. "New England's Spirit of Persecution," issued in

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1693 without place of publication, contains matter that would have made Philadelphia an unhealthy place for its printer. It is supposed by some authorities that he printed this after his settlement in New York, and before he got down to the routine business of his new office. There were printed by him also three separate New York acts of the year 1692, all three of them without place of publication or name of printer. For reasons that need not be given, uncertainty exists as to whether he printed this group of titles in New York or in Philadelphia, just before his departure thence to his place of refuge. The first publication bearing his name as printer, and New York as place of issue, was the proclamation of Governor Fletcher, "To All Officers and Ministers Ecclesiastical and Civil," dated Fort William Henry, June 8, 1693, and printed certainly in this year, if its imprint may be accepted at face value. It is possible that earlier than this proclamation by two or three weeks was Nicholas Bayard's journal and other papers relating to Governor Fletcher's expedition against the French in 1692-93. This book, with the title, "A Narrative of an Attempt made by the French of Canada upon the Mohaques Country," appeared without place of publication, as printed by William Bradford in 1693. A London edition of the book, "A Journal of the Late Actions of the French at Canada," licensed 11th September 1693, refers to the narration as having been "already Printed at New York," and it is not unlikely that this book may claim priority in publication over the proclamation dated at Fort William Henry, the eighth of June of this year.

Connecticut

It seemed for some time that one of the principal uses of Bradford's new stand was to be a vantage ground from which he and George Keith might sling printed invective at the Pennsylvania authorities, but as soon as the spleen was out of his system Bradford applied himself industriously to the building up of a successful and important printing business in New York. From his shop came the first printed series of assembly votes and proceedings to be published in any of the colonies, and in succession many significant governmental and literary productions. He began on 8th November 1725 the first New York newspaper, "The New York Gazette," and continued its publication until 1744. He was the initiator of printing in two of the greatest of the American colonies, the virtual founder of paper making in America, and the progenitor of a family of printers who continued the practice of the craft for a century after his first establishment of the Pennsylvania press in 1685.

CONNECTICUT.—For many years after the beginning of printing in Cambridge, the Massachusetts press continued to take care of such printing of other New England colonies as was not sent to the London shops. The official printing of the colony of Connecticut was for a long period put into the hands of Samuel Green in Cambridge, and later confided to Samuel and Bartholomew Green, his sons, of Boston. This association led the Governor and Council to turn to the Green family when it was determined, on Governor Saltonstall's motion, to seek a resident printer for Connecticut. The first offer of the post in this year was made to Timothy Green, of Boston, the grandson

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of Samuel, of Cambridge, but not wishing to give up, as he expressed it without very much originality, "a certainty for an uncertainty," this printer declined to remove himself to the neighbouring colony. The offer was accepted, however, by Thomas Short, of Boston, who was engaged at a salary of fifty pounds a year to print the current Connecticut Assembly business. Short moved to New London in the spring of 1709, where sometime in the month of June he issued two pieces that contend for the distinction of priority as the earliest Connecticut imprints. These were a broadside proclamation entitled "A Proclamation for a Fast," ordered on 15th June 1709, and probably printed immediately afterwards, and "An Act for Making and Emitting Bills of Publick Credit," passed on 8th June of that year. The evidence seems to point to the money act as the first of these in order of publication. The most notable imprint that resulted from his three years of service was "A Confession of Faith," known popularly as the "Saybrook Platform," New London, 1710, a work of such wide interest as to call for an edition of two thousand copies. Thomas Short died in 1712, and was succeeded in office by the Timothy Green whose fears four years earlier had not permitted him to undertake a post of uncertain stability. For more than a century the sons, grandsons, and great-grandsons of this craftsman continued to print at New London, New Haven, Hartford, and other Connecticut towns. There was no newspaper established in Connecticut until James Parker, on 12th April 1755, began in New Haven the publication of the "Connecticut Gazette."

New Jersey

NEW JERSEY.—The beginnings of printing in New Jersey have elements of uncertainty that have not yet been resolved. With two exceptions before 1755 the governmental and other work of this colony was executed by William Bradford, of Philadelphia and New York, or by Andrew Bradford, of Philadelphia, always with one or the other of these cities named in the imprint as place of publication.

The establishment of a permanent New Jersey press dates from the return of James Parker to his native town of Woodbridge sometime before 1755, after having won reputation for his newspapers in both New York and New Haven. The earliest Woodbridge imprint of which a copy remains seems to be "An Ordinance for Regulating and Establishing the Fees of the Courts of Chancery of the Province of New Jersey," 1755. It was not until 1758 that Parker was appointed government printer, and in the meantime the greater part of the New Jersey official work was sent to Philadelphia for execution by the younger William Bradford. The first permanent New Jersey newspaper was the "New Jersey Gazette," begun at Burlington by Isaac Collins in December 1777, and removed by its publisher a few months later to Trenton, where it continued to be published with poor success until 1786.

The story of New Jersey printing origins, however, does not rest upon these well understood incidents in the life of James Parker. There exist, to puzzle bookmen doubtless, two sets of session laws of the Assembly, with dates many years earlier than 1755, bearing the names of Perth-Amboy and of Burlington, the New Jersey capitals, in their imprints. The Acts

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of 1723 claim on their title page to have been " printed by William Bradford in the City of Perth Amboy, 1723." The Acts of 1727-28 bear an imprint which reads, " Burlington Printed and Sold by Samuel Keimer, Printer to the King's most Excellent Majesty, for the Province of New Jersey, MDCCXXVIII." It is known that Franklin and Samuel Keimer spent about three months in Burlington in 1727, or early in 1728, for the purpose of printing an issue of paper money provided for in an Act of Assembly of December 1727, and furthermore, that they took with them a copper-plate press " contrived " by Franklin for the job. Keimer was well paid for the contract, and it may be assumed that he found it worth while to move his letterpress printing-press to Burlington for the purpose of printing the laws of the session in that town. The New Jersey laws up to this time, with the one exception mentioned, had been issued with the imprints of New York or Philadelphia, and it seems reasonable to believe that this set too would have borne a Philadelphia imprint if Keimer had not actually had a press at hand in Burlington. This assumption is strengthened by reminding ourselves that in the year 1723 a Perth-Amboy imprint had appeared with the name of William Bradford as printer. Various explanations, some of them fantastic, have been urged to account for the temporary removal of Bradford's press to Perth-Amboy, but it has been generally overlooked that in 1723, as well as in 1727, the Province of New Jersey put out an issue of paper money. The conclusion that follows upon mention of this fact is that, as William Bradford was doing the official printing of New Jersey at this time, he was probably, and

Rhode Island

quite naturally so, given the contract for the making of the notes in question. To prevent fraud on the part of the printer in the handling of these bills, certain cautionary provisions of the Act made it almost imperative that he work, as Keimer was compelled to do later, under the observation of commissioners appointed to represent the Government. For these reasons one may assume that Bradford printed the money in Perth-Amboy instead of in his New York office. The job was one of unusual profit for the printer, and the notes were made in this case, I believe, from woodcut blocks, which could be printed on an ordinary press. It is not difficult to think of Bradford for this reason moving a press and appurtenances from New York to Perth-Amboy and, after the money had been finished, of printing there an edition of the recent Assembly statutes. At any rate we have the coincidence that in these two years, 1723 and 1728, when paper money issues were printed in New Jersey by outside printers, volumes of newly made statutes also appeared bearing the names of these printers and of the New Jersey towns in which the money had been put to press. There is little doubt of the genuineness of Keimer's Burlington imprint, and on the basis of analogy, strengthened by the assumption that Bradford printed the money of 1723 and printed it in Perth-Amboy, one is willing to acknowledge as genuine the imprint in Bradford's case too, and to concede the year 1723 as marking the beginning of printing in New Jersey.

RHODE ISLAND.—The first printer of Rhode Island was that brother of Benjamin Franklin who appears

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in an unamiable light in the "Autobiography." In the year 1722 James Franklin had got into trouble with the Boston authorities for matter of an alleged seditious character published in "The New England Courant." It is probable that never after his spell of imprisonment and conflict did he feel at ease in the town of his birth, and when his brother John, a tallow chandler of Newport, urged his removal to that city and backed up the invitation with encouragement from several prominent citizens of the place, he determined to take his press thither and begin anew. The first known imprints from a Rhode Island press were two pieces he issued at Newport in the year 1727; that is, John Hammett's "Vindication and Relation: Giving an Account of his separating from the Baptists, and joining the Quakers," and "The Rhode Island Almanack For the Year 1728," by Poor Robin. He continued his activities until his death eight years later, when Ann Franklin, his widow, assumed charge of the business and, except for the help of her son, James Franklin, Jr., from 1748 to 1762, carried it on alone until her death in 1763. During the latter half of this year she took as a partner Samuel Hall, who succeeded her in the business. The elder James Franklin established the "Rhode Island Gazette," but this first newspaper of the colony had only a short life. Ann Franklin and her son in 1758 began the publication of "The Newport Mercury," a newspaper that continues to be published to-day after a hundred and sixty-eight consecutive years. In 1762 William Goddard, in partnership with Sarah, his mother, began his notable career by setting up as printer in Providence. His success was not what he thought it

Virginia

should be, but after his removal to Philadelphia in 1765 Sarah Goddard continued the business until 1768. Her daughter, Mary Goddard, in later years made a notable success of the "Maryland Journal" and of the printing house that she, as her brother's partner and scapegoat, conducted in Baltimore during the Revolutionary War. These two women and Ann Franklin provide excellent examples of that all but forgotten type, the colonial business woman who, as a matter of course, assumed charge of the affairs laid down by a husband or son.

VIRGINIA.—It has already been told that the first effort at the establishment of a press in Virginia in 1682 was frustrated by Government interference, and the printer Nuthead compelled to remove to the neighbouring province of Maryland. Nearly fifty years later Maryland repaid her debt for the services of Nuthead when William Parks, her public printer, opened in 1730 a branch printing house in Williamsburg, and became the first public printer of Virginia. This eminent individual had conducted printing shops and newspapers in Ludlow, Hereford, and Reading in England, and at Annapolis in Maryland. He was a man of excellent public spirit, who possessed as well a pretty taste in "belles-lettres." The issue of his American presses possess in consequence a distinction not always found in the utilitarian productions of the colonial printer. His first imprints were "The New Tobacco Law," the "Acts of the Virginia Assembly for the May Session of 1730," and a commercial manual known as "The Dealers Pocket Companion." No copies of these works are known, so that it is im-

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possible to give their exact titles. In the same year, however, Parks printed at Williamsburg, Governor William Gooch's "Charge to the Grand Jury" and John Markland's "Typographia, an Ode on Printing." The first of these has distinction as the earliest extant Virginia imprint; the second as the first American contribution to the literature of typography. One copy of each is known to exist at the present time. Parks established the "Virginia Gazette" in 1736, and continued it until his death in 1750. He built and operated a paper mill at Williamsburg, and in other ways made himself one of the most important American printers of his day. He was succeeded in his office of public printer of Virginia by his journeyman, William Hunter.

SOUTH CAROLINA.—The Government of South Carolina is said to have offered, about the year 1730, the sum of £1000 currency of the colony as a premium to the first printer who should settle in Charleston. In that year and in 1731 two printers came to the colony in the hope of gaining the reward. The first to arrive was Eleazer Phillips, Jr., of Boston, who rejoiced for only a short year in the premium and its consequent title of "printer to his Majesty," for he died in July of the year 1732. His successor in office, Thomas Whitmarsh, had little better fortune, for he too, as Isaiah Thomas says, "was very soon arrested by death." Early in 1733-34 the vacancy resulting from his death was filled by the arrival in Charleston of Lewis Timothy, the son of a French Protestant refugee, who had taken shelter in Holland at the time of the revocation of the Edict of Nantes. Lewis

South Carolina

Timothy learned printing in Holland, and acquired there an estimable wife. Later he emigrated to Philadelphia, became one of Franklin's journeymen, and the first librarian of the Philadelphia Library Company. The story is carried forward by a passage from Franklin's "Autobiography." "In 1733," writes Franklin, "I sent one of my journeymen to Charleston, South Carolina, where a printer was wanting. I furnished him with a press and letters, on an agreement of partnership, by which I was to receive one third of the profits of the business, paying one third of the expense. He was a man of learning, and honest but ignorant in matters of account; and, though he sometimes made me remittances, I could get no account from him, nor any satisfactory state of our partnership while he lived. On his decease, the business was continued by his widow, who, being born and bred in Holland, not only sent me as clear a state as she could find of the transactions past, but continued to account with the greatest regularity and exactness every quarter afterwards, and managed the business with such success, that she not only brought up reputably a family of children, but, at the expiration of the term, was able to purchase of me the printing house, and establish her son in it." The subject of this encomium, Elizabeth Timothy, died in 1757. Her son Peter had been conducting the business for seventeen years at the time of her death.

The first South Carolina imprints that can be traced were the newspapers established by the rival printers of 1732. Eleazer Phillips, Jr., seems to have begun, in January 1732, "The South Carolina Weekly Journal," and conducted it for six months or so

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between that time and his death. No copy of this newspaper has been found. On 8th January of the same year Thomas Whitmarsh began publication of "The South Carolina Gazette." Ceasing with his death in September 1733, this paper was re-established by Lewis Timothy in 1734. The earliest book to come from the South Carolina press is believed to have been "An Essay on Currency, written in August, 1732." It was printed by Lewis Timothy at Charleston in 1734, and a single copy in the Charleston Library seems to be all that remains of the issue. The first South Carolina imprint of any consequence was Nicholas Trott's "Laws of the Province of South Carolina," printed notably well by Lewis Timothy in Charleston in 1736.

NORTH CAROLINA.—Like the first printer of Virginia, the prototypographer of North Carolina is remembered as a man of unusual public spirit and of praiseworthy accomplishment. James Davis came from Virginia to Newbern, North Carolina, in 1749, possibly after serving an apprenticeship with Parks in Williamsburg. He was appointed public printer at an annual salary, and in this office he remained almost without interruption until the year 1777. The first North Carolina imprint seems to have been the "Journal of the House of Burgesses for 1749." In 1753 or earlier Davis began the publication of the "North Carolina Gazette," a journal that continued to be issued for about seven years. In 1764 he made another journalistic effort with the "North Carolina Magazine," and it is probable that this continued with moderate success until the earlier name was resumed in 1768.

New Hampshire

During the later years of his business activity Davis had a rival in the person of Andrew Steuart, who came from Philadelphia to Wilmington, North Carolina, in 1764, received part of the public business through the influence of the governor, began a newspaper, and died in 1769 after a brief period of success.

NEW HAMPSHIRE.—New Hampshire was indebted for its first press to Daniel Fowle's resentment against the injustice meted him by the Massachusetts Assembly in 1754. In this year, while the House was deliberating the passage of an excise act, a pamphlet entitled "The Monster of Monsters," by Thomas Thumb, Esq., was hawked through the streets of Boston, and when its contents were found to reflect upon the conduct of the Assembly, its supposed printer, Daniel Fowle, was brought to the bar of the House for examination. As the result of a hearing conducted upon a somewhat irregular procedure, the pamphlet was burned by the hangman, and Fowle was reprimanded, jailed, and ordered to pay the costs of the proceedings. The account of the incident is found in Fowle's own pamphlets, entitled "A Total Eclipse of Liberty," printed by Fowle in 1755, and "An Appendix to the Late Total Eclipse of Liberty," printed as his farewell to Boston in 1756. He had been urged in the intervening months to settle in Portsmouth, New Hampshire, and thither he removed in July or August of this year.

New Hampshire printing annals are unusual in that the first printer in that province has left a record of his beginnings. In the Library of Congress copy of Ames's "Almanac" for the year 1757, printed by

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Fowle in Portsmouth, the printer has set out in type the following statement: "The first Printing Press set up in Portsmouth, New Hampshire, was in August 1756; the Gazette published the 7th of October; and this Almanack November following." There may have been other early issues of Fowle's press that seemed to him too unimportant to mention, but at any rate only these that he names and one other imprint of 1756 are known to exist. We can think of the "New Hampshire Gazette" then as the first Portsmouth imprint, and if Fowle had been a bit more definite we could perhaps name the "Almanack" as the second. As a matter of fact he brought with him from Boston to Portsmouth a partly finished job in the form of Jonathan Parsons's collection of seven sermons, entitled "Good News from a Far Country." On 4th November 1756 he announced in his journal that he was waiting for paper from London to complete the printing of the last two sermons. The book appeared with a Portsmouth 1756 imprint, and the possibility that it may have been completed early in November, some time before the "Almanack" was published, leaves in uncertainty the exact order of the earliest New Hampshire books.

Save for an interval of ten years in which Fowle was assisted by his nephew, Robert Fowle, he continued his press alone until his death in 1787. Robert Fowle removed in 1775 to Exeter, where he established a short-lived press. In 1778 a press was established in Hanover, which will be spoken of in the section devoted to the beginning of printing in Vermont. It should be said of Fowle's newspaper, "The New Hampshire Gazette," that it appeared first on

Delaware

7th October 1756, and that it continues publication to the present day, the oldest newspaper in the United States.

DELAWARE.—The three counties of Delaware looked upon Philadelphia as their metropolis, and until 1761 the printing of the colony was performed by various establishments of that city. In that year an English-born printer, James Adams, went out from the shop of Franklin and Hall and opened a printing-house in Wilmington, the chief town of Delaware. Here, Isaiah Thomas says, he established a newspaper called the "Wilmington Courant," but later investigators have been unable to find traces of the existence of this journal. The first pamphlet to issue from his press is sometimes said to have been "The Child's New Plaything, being a Spelling-Book," etc., Wilmington, 1761, but there seems no reason to give this title priority over Thomas Fox's "Wilmington Almanack for 1762," "The Advice of Evan Ellis to his Daughter when at Sea," or "The Merchant's and Trader's Security," all publications of 1761 recorded by title only in Hildeburn's "Pennsylvania Press." I have not found any copies of these books, and for the first extant Delaware imprint I believe it is necessary to turn to the year 1762, when Adams's name and Wilmington as the place of publication appeared in the "Daily Conversation with God: Exemplify'd in the Holy Life of Armalle Nicholas," a translation from the French. The first Delaware newspaper to attain permanency was the "Delaware Gazette," established in June 1785, and published from the Wilmington office of Jacob A. Killen.

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GEORGIA.—Until the year 1763 the printing of the colony of Georgia was executed in London, at Charleston, in the neighbouring colony of South Carolina and at Williamsburg, Virginia. The colony was established in 1732 under the auspices of a group of men, among them James Oglethorpe and the first Earl of Egmont, who had studied with advantage the science of colonization as evolved from the experience of their predecessors in English America. It is somewhat to be wondered at that the press was not set up at the first go by the enlightened promoters of the Georgia settlement, but to undertake a discussion of that subject would lead us far afield. It was only in the session of March 1762 that the Assembly passed an act for the encouragement of James Johnston, "lately arrived in this province from Great Britain," as printer to the Government at an annual salary of one hundred pounds sterling. We know little of Johnston's activities until the appearance on 7th April 1763 of the first number of the "Georgia Gazette." With the usual suspension during the Stamp Act troubles, this journal continued until, in May 1776, the impending Revolution made its publication impossible in this far southern outpost of the English colonies. On 30th January 1783 Johnston began newspaper publication again with the "Gazette of the State of Georgia." Soon afterwards the old name, the "Georgia Gazette," was resumed, and the journal continued until 1802, when its proprietor announced that his age and poor health made its further publication impossible. No one has offered a satisfactory explanation of the absence of dated Savannah imprints for the year following 4th March 1762. Johnston

Louisiana

was in Savannah when on that day the act for his encouragement was passed, and there was plenty of work at hand to be done. The laws for 1761 and 1762 and for several years previous to this were published many months after the first issue of his newspaper in April 1763, for they are found advertised as lately published in the "Gazette" for 6th December 1764 and 21st March 1765. It is generally agreed that this paper must be regarded as the first product of the Georgia press until investigation or chance shall uncover an earlier publication.

LOUISIANA.—The first press to begin operation in Louisiana was set up in New Orleans perhaps as early as 1764. In this year, before the cession of Louisiana to Spain and England had been consummated, the French governor asked the home authorities to grant permission to "le Sieur Braud negociant" to establish at his own expense a printing office in the city of New Orleans. One learns from the petition that Braud was awaiting the arrival of type and other articles of equipment he had ordered from France, though in the meantime he had already set up a press and had been usefully employed in printing paper money from an engraved plate. The governor answered for his intelligence and zeal, and approved his plea for the exclusive right to print and to sell books in the colony. The granting of Braud's request was the last monopoly acceded by the French Government in Louisiana. It is probable that as the result of this petition the Braud press soon began its activities. At least one imprint of the year 1765 has been found that may

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have come from this establishment, but this "Extrait des Régistres, des Audiances du Conseil supérieur, de la Province de la Louisianne. Du 7 May 1765," bears neither place, date, or name of printer, so that it cannot be accepted as a New Orleans issue without further evidence. The first New Orleans imprint of undoubted authenticity is the important "Mémoire, des Habitans et Négocians de la Louisianne, sur l'événement du 29 Octobre 1768." Its colophon reads, "A La Nlle. Orleans. Chez Denis Braud. Imprimeur du Roi. Avec permission de Mr. L'Ordonnateur. M.DCC.LXVIII." The action that this lengthy document seeks to justify was the expulsion by the uneasy French colonists of the Spanish governor, Antonio de Ulloa, and its printing brought Braud before Alexander O'Reilly when that warrior came to New Orleans some months later as the governor of a colony now indubitably Spanish. He was let off the penalty on his plea that as royal printer for the colony he had been without option as to what should pass his press when copy came to him, as this had done, bearing the official signature of the *ordonnateur*. Indeed the value to the new government of a printing establishment seems to have been well understood by O'Reilly, and it is probable that in any event Braud would have suffered a light punishment. During the two years 1768 and 1769 some twenty titles, some of them pamphlets of considerable size, are known to have come from this busy press. The earliest imprint of the second New Orleans printer, Antoine Boudousquié, bears the year 1777 as its date. The first newspaper recorded as having issue from this city or from any Louisiana

Vermont

press is the "Moniteur de la Louisiane," which probably began publication in March 1794 under the auspices of the printer L. Duchat.

VERMONT.—When Alden Spooner went from New London to Dresden, now Hanover, New Hampshire, in the fall of 1778, that town, geographically a part of New Hampshire, had recently been admitted into the political district known as Vermont. On this account Spooner is claimed often as Vermont's first printer, and there is no serious objection to anyone making this claim if he cares to. Dresden was situated in a strip of debatable land between the contiguous states just named. One of the reasons, indeed, that influenced Congress in its refusal to admit Vermont into the confederation of States was this very assertion of sovereignty over the strip of territory east of the Connecticut River, and a year after Spooner's coming to Dresden that town found itself let go of by Vermont to become once more a part of the State of New Hampshire. Thus Spooner may be claimed, and justly, as a New Hampshire printer. One may resolve the question by saying that the geographical area known as Vermont has no claim on Spooner as its first printer, but that Vermont, the body politic, may rightly call him her prototypographer. On 15th October he printed 250 blank commissions for the State of Vermont and two weeks later 100 proclamations and 300 election sermons. His bill exists for services to the State from 15th October 1778 to 1st June 1779, and during the greater part of this time the town of Dresden had been considered a part of the political entity known as Vermont. It is quite

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as easy, however, for the reasons given, to deny Vermont's claim to Spooner as its first printer as it is to admit it, so, the case stated, we proceed to other fields after remarking that the Thanksgiving Proclamation of 18th October 1778 was the first issue of the Dresden press besides the blank form that has been mentioned. The second issue of any consequence seems to have been the election sermon preached by Eden Burroughs, entitled "A Sincere Regard to Righteousness and Piety, the sole Measure of a true Principle of Honour and Patriotism." The bill to the State for the proclamation and for the sermon was dated 27th October 1778. The newspaper that Spooner began in Dresden early in May 1779 came into being three months after that town had become once more a part of New Hampshire, so that it may hardly be regarded as the first Vermont newspaper.

I have spoken heretofore of the Spooner press as if its sole representative were Alden Spooner, whereas the firm that controlled it was composed of the brothers Judah Paddock and Alden Spooner. Some of the imprints carry both names, others only that of Alden. There is, in truth, reason to doubt that Judah Paddock Spooner was engaged in the Dresden business in person, but at any rate when the Dresden press closed down late in 1779 and the Vermont authorities sent again to New London for a printer, it was Judah Paddock Spooner and Timothy Green who received the appointment. There exists a charge against the State by this firm, located in Westminster, Vermont, for eighty thanksgiving proclamations, dated 1st November 1780.

Printing after the Revolution

THE DIFFUSION OF PRINTING AFTER THE REVOLUTION

In the foregoing pages have been set forth the essential facts relating to the origin of printing in such of the American colonies as had presses in operation at the close of the Revolutionary War. After the year 1783 the diffusion of printing throughout the country was so rapid that the relation of its history becomes either a mere catalogue of names and dates or else demands more space than is provided in the plan of the present publication. It will be well, however, to follow the steps by which the press was carried away from the Atlantic coast across mountain and prairie to the Pacific, and along river and trail to the Gulf and to the Great Lakes.

The successful close of the Revolution saw an immediate movement of emigrants to the free lands beyond the mountains. From Philadelphia, through Lancaster over the Laurel Hills to Pittsburgh and the Ohio country; from Maryland and Virginia, through Cumberland to Pittsburgh over the trail made for the passage of Braddock's slaughtered army; from Virginia and the Carolinas, through the Cumberland Gap to Kentucky; from New England and New York to Buffalo and the Lake Country—these were the lines the people followed in that sudden piercing of the Appalachian barrier, and wherever the pioneer ventured, the printer quickly followed.

Pittsburgh in 1786 was a Pennsylvania frontier river port of some three hundred souls. Here in this year John Scull, a Quaker from the eastern part of the State, set up the first trans-Alleghany press, and

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on 29th July began the publication of the "Pittsburgh Gazette," a journal now known as the "Commercial Gazette," that has been published continuously ever since. In the same year John Bradford, a Virginia printer, was granted a lot on which to build a printing house by the people of Lexington, Kentucky. The transportation of his press and equipment from Philadelphia to this frontier town was one of those arduous journeys that make up the epic of the West. Even before he had got his type completely out of pie, he brought out on 11th August 1787 the first number of the "Kentucke Gazette." It was seven years later that William Maxwell came out of New Jersey into the Ohio country and, at Cincinnati, began, on 9th November 1793, the publication of "The Centinel of the North-Western Territory." A printer from Kentucky set up a press in Indiana in 1804, and in 1808 Joseph Charless set up a press at St Louis, Missouri, the first beyond the Mississippi. In 1833 a printer, whose name is unknown, carried a press from Mexico to Monterey in California, and was followed in the next year by Agustin Vicente Zamorano. Three centuries, less five years, had elapsed since Juan Pablos began printing in Mexico, and two centuries, less five years, since Stephen Daye set up a press in Massachusetts. By its establishment on the Pacific, the American press had come to the end of a weary, long journey over a painful road.

To relate in the same detail as in the foregoing sections the story of printing in the United States and Canada during the nineteenth and twentieth centuries is not contemplated in the present work. A summary of its history during the later period can be given,

Printing after the Revolution

however, by mentioning certain movements and inventions that indicate the course and character of its progress. Here as elsewhere the artistic depression that characterized the typography of the nineteenth century has been lifted by the spirit breathed into the art by William Morris and his followers. Here, as elsewhere, there never have been lacking presses that turned out excellent work at a time when most printing was very poorly executed. There was no Whittingham in nineteenth-century America, but Theodore Low De Vinne taught and practised the high traditions of his art, and John Wilson, of the University Press at Cambridge, maintained, though less successfully, the same ideals of excellence that have made the name of the Chiswick Press in London a byword for conscientious and thoughtful typography. Here too the invention of the cylinder press and of the Linotype and Monotype type-setting machines have worked a revolution in the trade which might have ruined it artistically, if the better printers had not learned that, tools and methods be what they may, the quality of the product is finally determined by the craftsman's intelligence.

The colonial printing house craftsman retained a memory of the guild in which his art had been nourished, but there is no evidence that he formed an organization for his protection. During the food scarcity that existed in New York in the days of the British occupation in 1776, the journeymen printers organized temporarily for the purpose of forcing a living wage from their employers. When this object had been accomplished the organization broke up. In Philadelphia in 1786 a similar organization was

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formed, with identical results. In 1795 a permanent "Typographical Society" was formed in New York that lasted for two and a half years, to be succeeded almost immediately by the "Franklin Typographical Society of Journeymen Printers of New York." This society expired in 1804, but in the meantime the principle of organizing to fix wage scales and to enforce them by the strike had taken hold. The printed wage scale presented by the members of the Philadelphia Typographical Society in 1802 is probably the oldest printed document of the sort in existence. In these local societies was the germ of the National Typographical Union, formed in 1852 by the coming together of fourteen separate organizations. When the Canadian Unions were admitted to this body in 1869, the International Typographical Union, by this action, came into being.

The master printers began to realize the evils of unregulated competition, and in 1863 the Typothetae of New York was formed in that city. The movement spread to other cities, as had been the case with the printers' societies, and in 1887 the several organizations came together as the United Typothetae of America. The history of printing in the United States of the nineteenth century has therefore these three focal points: the invention of machinery, which removed it from the household to the factory stage of economic development; the formation of the Unions, and the formation by the employers of the partly defensive Typothetae, organizations which have given the trade prominence in the history of subsequent labour struggles in the United States; and last, that revival of fine printing which has happily changed the

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appearance of the printed book, the magazine, and even of the daily newspaper. Perhaps the best thing that can be said of the present-day printing craft in the United States is that it strives to apply what it has learned of beauty of design and execution to the common output of its shops—the newspaper, the advertising circular, and the telephone directory. In the ultimate fruition of such a spirit as this lies the hope of art.

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Canada

CANADA.—The first press in what is now the Dominion of Canada was that which Bartholemew Green, Jr., removed from Boston to Halifax, Nova Scotia, in the year 1751. Unhappily for his prospects, Green hardly survived the effort of transporting himself and his equipment to Nova Scotia. He died, Thomas says, within six weeks of his removal, and was succeeded by his Boston partner, John Bushell.

In the first week of January 1752 this printer began the regular issue of the "Halifax Gazette," and with this newspaper, it seems from the information at hand, he inaugurated the art of printing in the section now known as the Dominion of Canada. It was probably in December of the same year that he began the printing of the first separate publication known to proceed from the Canadian press. This was, to give its title briefly, "Treaty, or Articles of Peace between His Excellency Peregrine Thomas Hopson, Esq., Governor of Nova Scotia, and Major Jean Baptiste Cope, Chief Sachem of the Tribe of Mickmack Indians, this 22nd day of November 1752," a sheet of two leaves bearing in its colophon the name of John Bushell, Printer to the Government, and Halifax, 1753, as the place and date of publication.

Bushell was succeeded in 1758 by Anthony Henry, who is said to have acquired the money needed to purchase his predecessor's equipment by his marriage to a negress, who admired his person and proposed the alliance. Henry seems to have been anything but an intelligent and industrious printer. It was, therefore, only with the coming of Robert Fletcher to Halifax in 1766 that the art in Nova Scotia assumed its customary position of dignity. By this time, too,

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printing had been introduced elsewhere in Canada with important results.

As the result of the Peace of 1763 Canada became permanently a part of the British Empire. Hardly had the change of government taken place when two printers came to Quebec from the colonies to the southward. William Brown, at one time employed as a journeyman in the printing house of William Hunter, of Williamsburg, Virginia, joined with Thomas Gilmore, a Pennsylvanian, and a former apprentice of William Dunlap, of Philadelphia, to form a partnership that continued for many years as Brown & Gilmore. This establishment, in serving a bilingual community, issued from its presses many works in both the French and English languages. It is usually said that printing began in Canada with the publication, on 21st June 1764, of the first number of the "*Gazette de Québec*," but Philéas Gagnon records the printing in 1759 of two mandates of the Bishop of Quebec, Henri-Marie Dubreil de Pontbriand, and argues strongly and sensibly that these were printed, one in Quebec and the other in Montreal, on a private press owned by the Bishop. There exists also the "*Lettre d'un habitant de Louisburg*," with the imprint "*A Quebec, Chez Guillaume le Sincere, à l'Image de la Vérité, M.DCC.XLV.*," but the obviously pseudonymous appellation of the publisher arrays instant suspicion against Quebec as the place of publication. Time may bring greater certainty in these disputed matters; at present the newspaper referred to maintains its claim to priority in the list of Quebec imprints. The earliest book or pamphlet from the Brown & Gilmore press was probably that one in the language of

Canada

the dominant nation, entitled the "Presentment of the Grand Juries." In the account book of Brown & Gilmore this title is entered some months before the appearance there of the first French book to be printed in Quebec—Languet's "*Le Catéchisme du Diocèse de Sens*"—of which two thousand copies were issued in the year 1765. In examining the list of works from this first Quebec press, one observes in general that the English mind was taken up with politics, while, to judge from the character of their publications, the French inhabitants seem to have turned to religion for consolation in their captivity. From 1774 until 1789 Brown continued the press alone. His immediate successor was Samuel Neilson. Brown & Gilmore began the publication of the "*Gazette de Québec*" on 21st June 1764. This fortnightly bilingual newspaper became wholly English in 1842, and ceased publication only in 1874, after one hundred and ten years of existence.

A peculiar significance attaches to the establishment of the next Canadian press, that of Fleury Mesplet at Montreal. It was primarily a press devoted to the interests of the French inhabitants of the country, and its proprietor was sent to Montreal as a semi-official agent of the Continental Congress during the brief period of the American occupation of that city in 1776. Mesplet left France for England in 1773, set up a press in London, failed of encouragement, met Benjamin Franklin, and in 1774 found himself in Philadelphia trying to make a living by the small amount of printing in French to be picked up from the Congress and from local individuals. When in 1776 the Continental Congress sent commissioners to Mon-

North America

treal for the purpose of winning Canadian support of its cause, it was provided that a printer should go with them. Assisted financially by his friend, Charles Berger, whose name appeared for a time in his imprints, Mesplet was able to convince the commissioners of his fitness for a post in which the fact of French birth must have been regarded as a pre-requisite condition. With his family and belongings loaded on five wagons, he set out from Philadelphia on 18th March 1776, and reached Montreal after a very difficult journey some six weeks later. On 18th May he found himself ready for business in the Canadian city, and on 10th June the Continental Army evacuated Montreal, leaving, we must believe, a very uneasy printer behind it. A month in prison seems to have been the extent of his punishment for the bad company he had kept in the town, and the month of July found him ready once more for the business of printing. The first issue of his Montreal press was the "*Règlement de la Confrérie de L'Adoration perpetuelle du S. Sacrement*," which appeared with a Montreal imprint in 1776 as a "new edition." The earlier edition had been printed by Mesplet before he left Philadelphia, and brought by him to Canada, but in the upsetting of his boat in the rapids of Chambly almost the entire stock had been destroyed, and to-day only two or three copies remain of this earlier issue of the "*Règlement*." On 3rd June 1778 appeared the first number of the "*Gazette du Commerce et Littéraire*," the first newspaper of Montreal, and the ultimate cause of a conflict between Mesplet and the authorities of Church and State. The suppression of the newspaper in June 1779 and an imprisonment of three years were the printer's

Canada

portion for an indiscreet use of his journal. After Mesplet's release in 1782 he resumed his business, and continued it until his death in 1794. An unsuccessful effort after the Peace of 1783 to secure reimbursement from the Congress for his losses sent him back to Canada a loyal Canadian, full of regret doubtless for his former association with the Americans. The seventy-seven titles that came from Mesplet's press during the years of his activity in Montreal form an unusually interesting list. Fewer than forty of these first Montreal imprints are known to exist to-day.

APPENDIX

ASIA, AFRICA, AUSTRALASIA

CHINA, JAPAN AND KOREA

RECENT investigations have thrown very considerable light on the early history of printing (both block printing and printing with movable types) in the Far East. It is now proved almost beyond controversy that paper, block printing, and printing from movable types were all known in China prior to their appearance or discovery in Europe. The invention of paper dates from the year A.D. 105, and paper made about A.D. 150 is in existence and proves to be of purely rag origin. Nearly nine hundred years later paper makes its appearance in Europe, having entered via Egypt and North Africa to Spain. As regards block printing, the first specimen now extant dates from the year A.D. 770, and is one of a million copies of a charm in the Sanskrit language in the Chinese character printed in Japan. The earliest block book bears the date corresponding to A.D. 868 and forms a roll 16 feet long. This is now in the British Museum. Movable types were invented by Pi Sheng during the years 1041-49, and made of earthenware, set in an iron forme. About 1100 types of tin were introduced. Both varieties were very little used. At the beginning of the fourteenth century types of wood were made and used. A

Appendix

fount in the Uigur language, dating from about 1300, has been discovered. In the year 1314 a full description of the method of printing with wooden types was written by Wang Cheng in the Book of Agriculture. Successful movable metal types were first produced in Korea in 1403, and the earliest extant book printed with them dates from 1409. Three different founts of metal type were produced in Korea by 1434. In spite of these facts no trace can be found of any connection between the block and type printers of China, Japan and Korea and the inventions of the same arts in Europe. Paper, apparently, is on a different basis. The progress of rag paper can be traced in its journey from the Far East to its arrival in Spain and its consequent dispersal over Europe. The idea of a separate invention some time in the fifteenth century has been given up.¹ But as regards printing with movable types the intermediate links are wanting. There is apparently no evidence of any knowledge in Europe of the Chinese inventions, and we are therefore left with a presumably independent invention.

European printing was introduced into China about 1589 by the Jesuits, who also started a press in Japan in 1591. The latter press produced some fourteen books before the extirpation of Christianity in that country early in the seventeenth century.

¹ Block printing apparently made its way through Turkestan in the thirteenth and fourteenth centuries and arrived in Egypt. Several prints are extant of Egyptian origin in this period.

Appendix

INDIA

The introduction of printing into India was due to the Portuguese missionaries. The first book printed at Goa in 1561 was a work by the first Archbishop of Goa, Gaspar de Leão.

AFRICA

The first printing press in Africa, apart from the Egyptian block-printed sheets of the period of the Crusades, was erected at Fez, in Morocco, early in the sixteenth century. The press was a Hebrew one, and the first book is dated by Adler in his *Gazetteer*, 1516 or 1521. There are one or two shadowy African imprints of the later sixteenth and seventeenth centuries scattered through Spanish and Portuguese bibliography, but we are not on solid ground until we come to the Cape Town press of 1814.

AUSTRALIA

A press was landed in Australia in 1787, but no one could be found who knew anything of the art until about 1795, when it was used for printing proclamations and official documents of that character. George Howe, who was the son of a printer at St Kitts, in the West Indies, and had practised at his trade in London, it is said on "*The Times*," became Government Printer and started the "*Sydney Gazette*," the first number of which appeared on March 5th,

Appendix

1803. In 1805 the "Colonial Pocket Almanack" was announced for publication, and on January 5th, 1806, the "Gazette" announced that "as much of the Almanack as could be got ready" was published. Shortage of paper was the trouble all through these early days of the press. An auction sale catalogue published a few years ago contained a copy of the Life of our Lord in Tahitian printed at Sydney, New South Wales, in 1814. The note appended described this as putting back the date of the earliest known Australian printed book by five years. The series of books (or rather booklets) in Tahitian printed to the order of the Rev. Mr Marsden, the senior Chaplain of the London Missionary Society in the South Seas, is quite well known, and there are copies of several of them in the Sir George Grey Library at Cape Town. In a letter from Mr Marsden, dated "On board *The Active*, Sydney Cove, November 22, 1814," he says: "The Catechisms I shall order to be printed previous to my sailing this day. I have four hundred copies now ready to send of the History of our Lord's Life [this presumably being the work of which a copy has just turned up]. The History of the Old Testament has been some time in the printer's hands and will soon be completed. What books they may want from time to time I can get printed here."—*Trans. Lond. Miss. Soc.* The Missionaries at Otaheite (Tahiti) announce the arrival from Sydney in 1815 of 400 New Testament History (evidently this book again), 900 Catechisms and 100 Hymns. On September 6th, 1815, they write that the Old Testament History being printed in Sydney was delayed for want of paper, and further, that they have sent

Appendix

a small spelling book to be printed. The following items are in the Sir George Grey Library :

Te Abi no Tahiti [ABC]. Sydney : G. Howe
[? 1813].

Te Mata no te parau na te Atua. n.p.d.

Parau no Tahiti [Hymns]. n.p.d.

"Grey Catalogue," 1859, Vol. 2, Pt. 4, pp. 117, etc.

Apart altogether from these Tahitian works, interesting as they are, there is in the British Museum a much earlier specimen of Australian printing. The General Standing Orders of New South Wales, printed at Sydney in 1802, is described in the General Catalogue of the Museum as the first book printed in Sydney. The Museum has also the Abridgment of established General Orders and Colonial Regulations accurately compiled and published the 1st of Jan. 1809. By Authority. Sydney, in New South Wales : Printed by G. Howe at Government Press. The copy in the Museum is bound up with the New South Wales Pocket Almanack for . . . 1809. Sydney : Compiled and printed at Government Press by George Howe.

NEW ZEALAND

Parts of the Bible were printed in the Maori language for circulation in New Zealand in 1829, but this was done in Sydney, New South Wales. In the following year a printing press and a printer, James Young, arrived in the colony. Some hymn sheets and a catechism were produced, it is believed, at Kerikeri, but after this no trace can be found of the press or of the printer.

Appendix

In 1834 William Colenso, then twenty-three years of age, landed in the Bay of Islands, having been sent direct from London in charge of a printing press. The press was set up at Paihia and was the foundation of the permanent press of New Zealand.

LITERATURE : *Carter (Thomas Francis)* : The Invention of Printing in China and its spread Westward. New York, Columbia University Press, 1925.—*Garnett (Richard)* : Essays in Librarianship and Bibliography. London, Allen, 1899.—*Cordier (H.)* : L'Imprimerie Sino-Européenne en Chine. Paris, 1901.—*Satow (Sir E. M.)* : The Jesuit Mission Press in Japan, 1591-1610. London, 1888.—*Hill (H.)* : The Early Days of Printing in New Zealand. In Trans. New Zealand Inst., Vol. 33, 1900.—*Colenso (Wm.)* : Fifty Years Ago in New Zealand, 1888.—*Adler (E. N.)* : Gazetteer of Hebrew Printing. London, 1917.

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